August 9, 1930 Vol. LXXVIII, No. 6

Textile World

Published every Saturday by Bragdon, Lord & Nagle Company,
Division of McGraw-Hill Publishing Company, Inc., New York
Editor: Douglas G. Woolf

Shortening the Route

MAJOR trends have a habit of sneaking up on us. We are often in the midst of important developments without knowing it.

Right now, we believe the textile industry is experiencing a major trend in machinery development without being fully aware of it.

The equipment cycle, if we can so term it, has its peaks and valleys just as has the business cycle —but the peaks of the former are apt to coincide with the valleys of the latter. When mills are running full and machinery manufacturers are behind in their orders, there is not the incentive for change which depression brings.

When, as at present, depression is linked with rapid style changes and with new trends such as synthetic fiber development for example, it is natural that there should be a particularly sharp "peak" of the equipment cycle.

And there is.

•

However, the cause is not so important as the results.

Just what *is* being done?

For years we have heard discussions of the "possibility" of shortening the route from raw material to finished fabric. Back in 1925, there was speculation on Henry Ford's textile experiment and on the question "Can the textile industry be 'Fordized'?" But always this was discussed merely as a "possibility."

Whereas, today, we are actually taking steps in that direction.

Recently we examined a report on new developments in textile machinery during the last few (roughly five) years. There were no less than seventeen actual examples cited—running all the way from fiber preparation to cloth finishing.

No one of these seventeen, of course, was as revolutionary as the introduction of the automatic loom. Nor was the sum total as revolutionary as was the substitution of power manufacture for hand work.

That type of revolution is not to be expected in the present stage of the textile industry. It is a truism that textile manufacture went through its most acute development stage decades before many of our newer industries were born—and that it cannot be expected to be in the same state of flux as are the automobile and radio industries for example. It is equally a truism that the textile mill—opinions to the contrary notwithstanding—has reached a high level of efficiency.

However no one believes—or should believe—that textile equipment is now at the static stage of perfection—or that nothing can be done to "shorten the route" or to make a better product at a lower cost.

Very much *is* being done.

The seventeen improvements noted above represent, in total, a radical and major machine development. Most of them offer an opportunity to eliminate intermediate processes or to speed up existing processes. To mention a few of them, there were single-process picking, long-draft spinning, high-speed warping, and range finishing. Experts may differ as to the extent to which any one of these may be applied, or as to the fundamental value of one or all, but the fact remains that they represent a definite approach to the problem of "shortening the route."

•

Some years ago a writer in these columns emphasized the importance of developing machinery to fit a process rather than developing a process to fit the machinery. That is just what machinery manufacturers are trying to do today.

And that, in turn, is what is making a textile manufacturer's life more difficult—but more promising.

The Week in Textiles

Outlook . . .

MERCHANTS ARE still wondering whether textile markets have touched bottom. Many believe they have; evidences of gains may not be visible for some weeks yet. . . . . Cotton goods are following sentiment of raw material and improvement there would draw out much unplaced business. Price-cutting has brought 80-square percales to new low basis. Wool goods are sluggish. Price cut by market leader renders competition keen. Tweeds for women's wear gaining. . . . . Slight improvement in knit goods but hosiery may not meet any real change till fall. Low-priced underwear better. Next season bathing suits to be opened next week. . . . . Raw silk up-turn improves markets for its products, but cutters are still cautious in operating for fall.

British Rayon Production . . .

IN JUNE, for first time in many months, the amount of British rayon yarn excised for sale exceeded the production. Total amount produced was 4,040,000 lbs. while the amount excised for sale was 4,129,800 lbs., comparing with production of 4,110,000 lbs. and sales of 4,055,600 lbs. in May. . . . . Total production in first half of this year was 24,160,000 lbs. and amount excised for sale was 22,555,700 lbs., leaving apparent increase in stocks of 1,604,300 lbs. During first half of 1929, production was 26,040,000 lbs. and amount excised for sale was 25,810,900 lbs., leaving apparent increase in stocks of 229,100 lbs.

Cotton Goods Prices . . .

AVERAGE PRICE of seven representative American cotton gray cloths declined 6c. per lb. during first six months of this year while average price of seven British cloths declined 4c. per lb., according to compilation by Textile Division of Department of Commerce. . . . . The margin between the price of one pound of raw cotton and the price of one pound of cloth for American cloths declined from 18.54c. in first six months of 1929 to 16.86c. in the corresponding period of 1930, and for British cloths decreased slightly from 18.74c. to 18.04c.

Shoulders Replace Toe-nails . . .

SCIENTIFIC PROGRESS threatens our jokes as well as our machinery. The old chestnut about the wear and tear on bed sheets caused by insufficient manicuring of toe-nails is now rendered obsolete by fact as well as by age. . . . . Shoulders wear hardest on sheets. This is the discovery made by the Bureau of Home Economics as result of tests made on 500 sheets discarded by a Washington hotel. These were found to be most worn at shoulder height, filling yarns giving away first. . . . . Now 139 test sheets are on trial at the same hotel, to determine the effect of quality of fiber upon performance of fabric. Made of one-inch strict middling, middling and good ordinary cotton, these sheets have been laboratory-tested for tensile strength, thread count and weight. Individual records are kept of the number of launderings and condition of each sheet, as a check against the wearability of the fibers involved. Additional laboratory examinations will be run on samples of those sheets which first fail under the shoulder-to-sheet test. . . . . The preliminary study on bed-sheet wear was summarized in TEXTILE WORLD on April 13, 1929.

The Business Outlook

"The heat wave is exerting a strong influence on the business weather. The drought with the consequent increases in farm commodity prices may yet turn the wholesale commodity price level upward and stimulate advance buying . . . The Farm Board has been saved from the task of supporting the wheat market or disposing of the surplus by the situation created in the corn belt . . . Sentiment is bullish though several statistical indicators continue to fall. Our general index of business activity fell to 86.4% of normal from 90.5% a week ago . . . It was 114.5% a year ago . . . Most encouraging is a rise in commercial loans—business men are borrowing for fall activity . . . Though general trade continues to sag under the strain of depleted purchasing power during the last few months, increased employment in automobile and textile centers is encouraging."

—The Business Week

Silk Consumption Gains . . .

DESPITE THE disorganized situation in the raw silk market, domestic consumption during July increased 10,552 bales over June. Deliveries to American mills in July totaled 39,948 bales as against 29,396 bales during the previous months. . . . July imports of raw silk were the highest for any month this year, totaling 47,036 bales, an increase of 14,694 bales over June.

Adjusting Disputes in Wool Trade . . .

PLANS HAVE been consummated by The Wool Institute, to raise the Mutual Adjustment Bureau to a position in the cloth and apparel industries comparable with the important service it is equipped to render. . . . The following board of governors has been appointed: William Goldman, Cohan, Goldman & Co., chairman; Meyer H. Lang, Fashion Park, Inc.; Max Friedman & Co., Inc.; I. Grossman, I. Grossman & Son, Inc.; Lewis Roth, Roth & Lohren; Louis Rauch,

L. & N. Rauch; Herman Bloch, S. Stein & Co., Inc.; Isaac Rittenberg, Rittenberg Bros.; F. K. Nixon, Worumbo Co.; A. C. Buckley, Buckley & Cohen; L. Bachman, L. Bachman & Co., Inc.; John A. Dimond; W. S. S. Graham, Selden Worsted Mills; C. M. Hoff, Libby, Hoff & Co.; James H. Knapp, The Geo. E. Kunhardt Corp.; W. V. E. Terhune, Terhune, Yereance & Wolff; and Zadock Wolff, Baruch, Wolff & Co.

Buy a New One . . .

A RECENT compilation places the amount of cotton used in the construction of the average automobile at 32 lb.

Underwear Output Up . . .

PRODUCTION of knit underwear during 1929 showed an increase of 6.7% over that of 1928, according to statistics released by Bureau of Census. . . . . Production last year amounted to 14,196,975 dozen garments compared with 13,304,471 dozen in 1928. . . . In women's wear, production of summer garments was more than twice that of winter garments while in men's wear the production of the latter was slightly in excess of the former.

Paterson Silk Institute . . .

PLANS ARE crystallizing for the group meetings to be held Sept. 18 to discuss the question: "Shall a Paterson Silk Institute Be Established?" . . . . James Wilson is general chairman of the project. . . . Speaking before the Paterson Rotary Club last week, John J. Fitzgerald, secretary of the Paterson Chamber of Commerce, stated that the meetings were designed primarily "to achieve a constructive community view of the Paterson silk industry."

Wool Consumption . . .

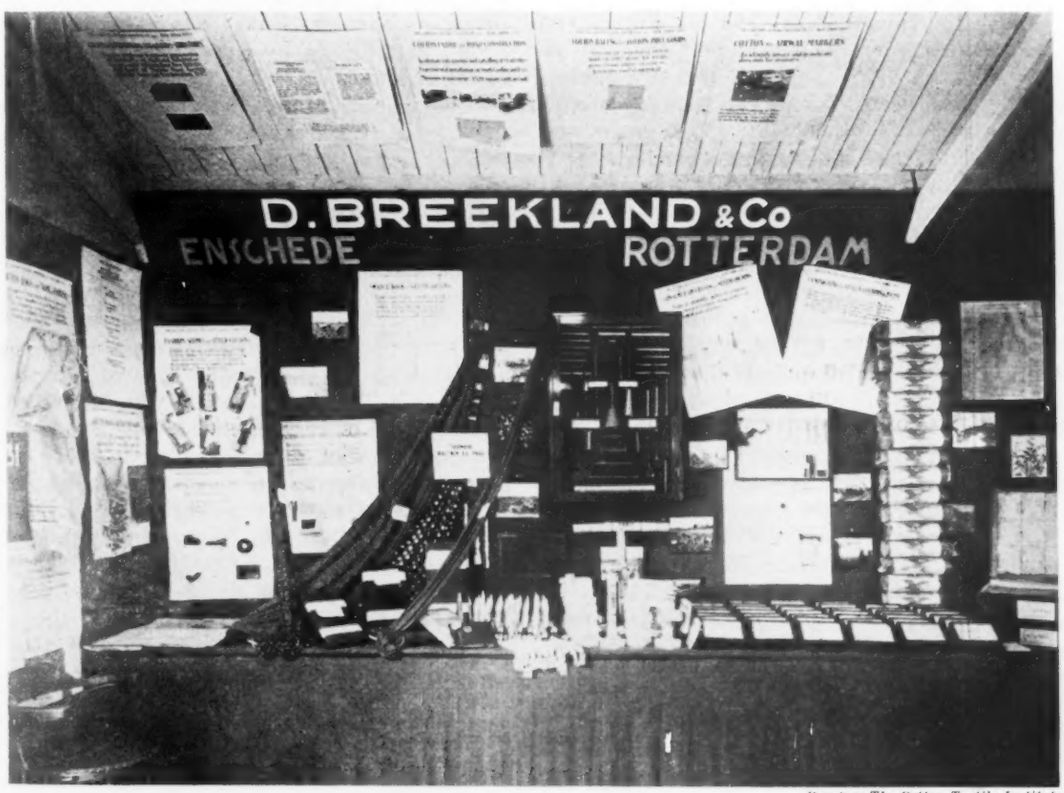
TOTAL QUANTITY of wool entering into domestic manufacture during June, 1930, reduced to grease equivalent, was 32,772,356 lbs., as compared with 32,640,860 lbs. in May, 1930, and 44,066,079 lbs. in June, 1929. The June figure is based on reports to the Department of Commerce from 438 manufacturers.

Hosiery Production . . .

OUTPUT OF hosiery, all classes, during June was 4,243,420 doz. prs., as against 4,435,821 doz. prs. in May. Shipments were also lower, the June figure being 4,189,136 doz. prs. compared with 4,512,770 in May. Stocks at end of month were practically unchanged, being 12,094,206 doz. prs. on June 30 as against 11,980,224 on May 31.

Machinery Exports Slump . . .

TEXTILE MACHINERY exports for June dropped to $705,000 as against $1,024,152 for June, 1929. . . . . Knitting machines and cotton looms showed the largest decreases, but there were increases in cotton spinning and twisting machinery, wool carding, looms and finishing machinery.



Courtesy The Cotton-Textile Institute

What The Cotton-Textile Institute is doing to extend the use of cotton was shown in one of the exhibits arranged for the "seven miles show" recently held in Enscheda, Holland, shown in the accompanying photograph. Illustrated posters and an exhibit assembled originally for display in England last spring were prominently displayed in one of the booths at the industrial fair in Holland attended by more than 300,000 visitors.

Herbert Hoover's Prediction

of Organized Technical Research in Textiles

About to Be Fulfilled

By Douglas G. Woolf

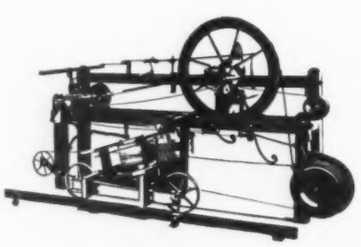
Editor, TEXTILE WORLD

"TEXTILE manufacturers must—and undoubtedly will—come to a recognition of the need for coordinated investigation of the premises on which their technique is based . . . The task of the industrial executive is to lend all possible aid to fundamental research movements started within his own industry and to the development of pure science effort in the country at large."—From interview with Herbert Hoover in Feb. 4, 1928, issue of TEXTILE WORLD.

THE thought that the above prediction made by Herbert Hoover, then Secretary of Commerce, is about to be fulfilled, gives me one of the two greatest thrills I have experienced during my association with the textile industry. The other came a few years ago when the cotton and wool divisions launched the programs represented by The Cotton-Textile Institute and The Wool Institute.

The reason why these two developments should provide thrills is apparent. Difficult as it is to isolate any one need as paramount, in a situation so complicated as is the present-day position of the textile industry, I venture the arbitrary statement that the basic requirement is *research*—both economic and technical. Everything *may* be all right in textiles—but the experience of the last decade does not indicate that this is so. Everything *may* be all wrong—but this seems hardly logical in view of the thought and ingenuity which generations of hard-working, clear-thinking men have poured into the industry. Our first job today is to find out what is right and what is wrong—and this cannot be done by following opinions, but by determining facts.

The industry, through its Institutes, is on its way toward economic fact-finding. The job has not been finished; it will not be finished this year or next. Any one who expected consummation within a few years had not the faintest conception of the meaning of research nor of the complexity of the textile problem—and, quite naturally, was doomed to disappointment. But, we repeat, a start has been made.



Consequently the next task is the one pointed out in these columns by Herbert Hoover in 1928—the initiation of coordinated technical research which will supplement, and render more effective, the economic research now under way.

Within the last three months, two major agencies have been created for the purpose of fostering textile research. Neither has any preconceived notions as to how or by whom this research should be conducted.

One is the United States Institute for Textile Research, organized in May at a meeting of representatives of the various divisions of the industry. "Organized" is hardly the term. This institute is not an organization; it can best be described as an "idea." It is not trying to impose a plan upon an industry; it is an attempt to offer to the industry an opportunity to find expression for its own recognition of the need for research. It is not a group of men who wish to direct a research institute; it is a group that wishes to induce the industry to direct its own institute.

This absence of self-interest was demonstrated when the Textile Research Council and the American Association of Textile Chemists and Colorists, both with a long background of ardent missionary work in this direction, subordinated their identity, as organizations, and merged their interests in the new Institute. It was demonstrated when the first-named of these two organizations offered its own articles of incorporation to the United States Institute. It was demonstrated when various associations sent either official representatives or unofficial observers to participate in the preliminary organization. It was demonstrated finally when it was announced that the directors and officers, elected in July, would resign at the first annual meeting in November in favor of successors to be elected for the full terms described by the by-laws.

The other agency is the Textile Foundation, created by the Merritt Bill to administer, in textile research, the major portion of the $1,800,000 fund derived by the Textile Alliance from the sale of German reparation dyes. Members of the directorate of this Foundation have stated positively that they have no preconceived notions as to how this fund should be utilized and are planning to receive suggestions, in open hearings, from any organizations or individuals who wish to appear. As a matter of fact, such an assertion is superfluous when one considers the broad-gauged caliber of the textile men appointed by President Hoover to serve on this direc-

torate: Franklin W. Hobbs, chairman, Stuart W. Cramer and Henry B. Thompson. These, with the Secretaries of Commerce and Agriculture, comprise the board.

Specifications for a Research Movement

WITH two such open-minded and flexible agencies now available, it is pertinent, therefore, to analyze this textile research problem and to set down certain basic principles which should be observed if the work of both is to be of maximum effectiveness. The following are offered by the writer as the net results of his own thoughts on the matter and of his contacts with men in the industry:

1. The technical research movement should be an *organized* one. In an industry so decentralized as is the textile industry, there cannot be the expectation of large-scale research conducted by individual companies, such as is true in the electrical industry for example.

2. It should be *continuing*. In research such as we have in mind, major results should not be expected in a year or in five years. It is a long-time proposition, and provision must be made for future financing.

3. It should be devoted to *fundamental* research. This means neither pure science research nor applied industrial research. The former is the type done by a scientist who has no particular industry and in fact no particular problem in mind but who is merely delving into the whole realm of the unknown. Applied industrial research represents the application of the results of both pure science and fundamental research to specific problems in manufacturing technique. Fundamental research occupies a middle ground between these two. It utilizes the results of pure science research for the investigation of all major premises upon which industrial processes are based. Here is an example: Dr. Charles H. Herty has pointed out that no one knows just what the cellulose molecule is, and yet progress in the industries dependent upon cellulose is seriously retarded by lack of that knowledge. Its determination would represent fundamental research. The worker would draw on the results of pure science research in the field of molecular chemistry and then later the results of this fundamental research in the structure of the cellulose molecule, specifically, would be applied by industrial chemists to such problems as the manufacture of rayon, the dyeing of cotton goods, etc., etc.

4. The research movement should be conducted by the industry *itself*. This is important not only from the standpoint of finances but from the standpoint of effectiveness. In addition to money, the movement requires continuing interest and support from the industry. This will be forthcoming only if the industry itself is responsible for and active in the development.

5. The research organization should have its own laboratories and its own staff, including both executive and technical personnel. It should do the research work itself. The cooperation, advice and help of schools, government bureaus, independent research organizations, and individual mills can and should be secured; their assistance in applying the results of fundamental research can and should be developed. But the work itself should be actually done by the centralized organization.

6. As to method of procedure, no attempt can or should be made here to outline this. Just as the worker in fundamental research should have an absolutely open mind on all the problems he approaches, so should the industry have an open mind as to the methods of prosecuting that fundamental research. It should not follow the plan of any country or any industry as a pattern. It should of course inform itself regarding other methods and should evaluate the relative advantages of those methods but the plan finally adopted should be one which is deemed most adaptable to the technical and economic conditions of the United States textile industry.

Coordinating the Two Movements

WITH these general principles in mind, it would seem apparent that the activities of the Textile Foundation and the United States Institute for Textile Research, instead of conflicting with or duplicating each other, can be coordinated toward the prompt accomplishment of the purpose each has in mind. The Foundation as we understand it—although of course we have no official word on this point—desires primarily to *finance* textile research. The Institute, as we have pointed out, represents the desire of the industry to *conduct* textile research. Consequently we feel that, in good grace, we can point out the possibility of the Foundation achieving its own purpose by helping the Institute to achieve its. This would not be in good grace if we were recommending to the attention of the Foundation any particular group of men or any particular organization. We are recommending merely an idea as represented by the Institute. We are recommending the opportunity to utilize the desire of the industry to conduct research, made vocal by the Institute. More important still, we are recommending to the industry the necessity of aiding the Foundation to achieve its aim.

"As long as the formation of a research institute is regarded as an advisable event which will take place some time in the future, just so long will nothing be done. It is only when manufacturers realize that such a step is more than advisable—is in fact absolutely and immediately necessary—that action may be hoped for."—From Editorial "A Call to Arms" in TEXTILE WORLD, July 26, 1924.

Naturally, the money which the Foundation has in its custody would be a help toward prosecuting the idea which the industry, through the Institute, has in mind. However, the income from the Foundation fund is not in itself adequate to do the fundamental technical research job for this industry. As an estimate, we would say that a minimum of $500,000 a year would be required. That money should come from the industry itself. It should represent cooperative contribution of all factors engaged in the industry. It would then represent one of the best investments the mills have ever made.

If this job is approached properly, there will be no question of the "rights" of the cotton division or the wool division or the silk division or any other individual branch of the industry. There are certain fundamental problems affecting the entire industry; there are others affecting primarily specific parts of the industry. An organization

representative of the industry as a whole can develop a program whose ramifications will serve all these needs.

Nor will there be any question of the "rights" of the producer of raw material or the spinner of yarns or the weaver and knitter of fabric or the wholesaler and retailer of the finished product. The research movement outlined above will help to create a fundamentally sound textile industry, by which all factors, from the cotton grower in Texas to the proprietor of a general store in North Dakota, will profit.

The project we have outlined is not Utopian. It has been proved to be entirely practicable in other industries. Nor is it merely desirable; it is essential. No greater obligation, no greater opportunity, faces our industry.

Initial Directors Named for Textile Export Association

FOLLOWING the first annual meeting of the newly formed Textile Export Association of the United States, held in the rooms of The Association of Cotton Textile Merchants of New York on Tuesday afternoon, the newly elected board of directors voted to defer action on the appointment of a president and vice-president until a date to be announced later after the directorate has been increased in size.

Eighteen firms engaged in exporting cotton textiles have thus far joined the association, and all were represented at the meeting. Since this number will be greatly increased in the near future by the enrollment of many other eligible houses, it was decided by unanimous vote of the members to amend the constitution to permit increasing the present board of directors from six to twelve members in the near future. Following the appointment of six additional directors, a president and vice-president will be chosen from the full board. In this way a full and fair representation will be assured for charter members as well as those whose signatures are secured later. Meanwhile, Floyd W. Jefferson will act as temporary chairman.

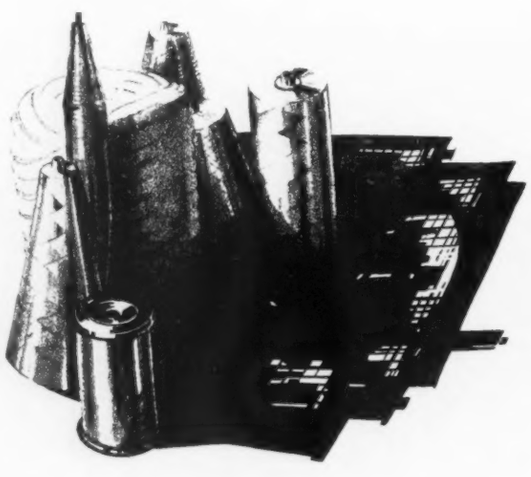
The following were elected as members of the board of directors: Floyd W. Jefferson of Iselin-Jefferson Co., and A. G. Kempf of Neuss, Hesslein & Co. to serve until 1933; Walter S. Brewster of Pacific Mills and Henry Lauten of Prince, Lauten Corp., to serve until 1932; S. Robert Glassford of Bliss, Fabyan & Co. Inc. and George W. Maull of M. C. D. Borden & Sons, Inc., whose terms expire in 1931. Perry S. Newell was appointed secretary-treasurer, and Norman E. White was appointed assistant-secretary. Headquarters will be maintained at 70 Worth Street, New York.

The board of directors will appoint a membership committee of five, the names to be announced later. This committee will endeavor to sign up all eligible firms among commission houses, converters and independent exporters without delay, so that the executive heads may be chosen and a new committee appointed to set to work on the problem of working out uniform terms of payment on foreign shipments.

That many firms will eventually join the new association was the opinion expressed by Floyd W. Jefferson, acting chairman, since it is manifestly to their interest to take advantage of the opportunity to join in the activities made possible under the constitution. The object of the new association, he stated, is to promote export trade in all textiles and, as set forth in the constitution, "To aid members in the conduct of their export business, to engage solely in activities pertaining to export trade in textiles as the term 'export trade' is defined in the Act of Congress of April 10, 1918, entitled 'An Act to Promote Export Trade, and for Other Purposes' known as Webb-Pomerene Act, and any and all acts amendatory thereof or supplementary thereto, and to do any and all things necessary or incidental to export trade and commerce, subject always to the provisions of the said statute and to all orders and regulations of the Federal Trade Commission thereunder."

Members of the new association, moreover, will be enabled to cooperate with one another, by contract or otherwise, solely in export trade, as defined above, to the end that members may obtain the benefits of such cooperation to the extent authorized by the Webb-Pomerene Act.

Another object of the new association will be to collect and disseminate information concerning market and credit conditions in foreign countries, stocks available for export by members, tariff requirements of foreign countries, and other matters of interest and value to those in the textile exporting business.



The following firms, all charter members of the association, were represented at the meeting: Amory, Browne & Co., Wm. L. Barrell Co. of N. Y. Inc., Edwin E. Berliner & Co., Bliss, Fabyan & Co. Inc., M. C. D. Borden & Sons, Inc., Brune, Pottberg & Co., Iselin-Jefferson Co., Minot, Hooper & Co., Neuss, Hesslein & Co., Garner & Co., Pacific Mills, Pepperell Mfg. Co., Prince, Lauten Corp., J. P. Stevens & Co. Inc., Turner, Halsey Co., Wellington, Sears & Co., Woodward, Baldwin & Co., and M. Lowenstein & Sons, Inc.

A Labor Policy for the South . . .

Must Be Based Upon Open Shop, Freedom of Contract, and Individual Liberty

By John E. Edgerton

President of National Association of Manufacturers and of Lebanon (Tenn.) Woolen Mills.

DISCUSSING A Labor Policy for the South before the Institute of Public Affairs of the University of Virginia on Tuesday of this week, John E. Edgerton, president of the National Association of Manufacturers and of the Lebanon (Tenn.) Woolen Mills, laid down the following three basic principles without which, he maintained, no industrial success could be achieved:

1. The Open Shop.
2. Unabridged and unrestricted freedom of contract.
3. Complete individual liberty within the law.

Mr. Edgerton said, in part:

"When I speak of labor or wage-earners, I wish it also understood that I am thinking not simply about the small percentage of them who are organized for mass action to effectuate certain theories or ideals, but I am thinking about the masses also of unorganized wage-earners and workers who are free American citizens, and are doing more thinking for themselves than they are given general credit for. In the South the vast majority of these elements have not been organized, neither by volunteers from outside their circumference, nor by themselves. That is not because, however, they have been denied the right to organize. It is because they have either not felt any necessity for it, or for other reasons satisfactory to themselves, have not cared to exercise a right which they know they have. The wage-earners, like the employers of this section, are almost wholly of one blood, one God and one language.

No Restriction of Opportunity

"I do not think that any labor policy would be acceptable or permanently beneficial to a people like this, whether they be employers or employes, which tends to reduce or restrict opportunity, to discourage individual initiative, to dull the sense of individual responsibility, or to circumscribe the liberties of individual action which inhere in the institutions of free men.

"Now, it would hardly be possible to discuss helpfully a labor policy for the South without touching upon some of the major issues, real or fanciful, which inhabit the field of employment relations. It is my conviction that those most talked about are not and never have been issues at all. For instance, the inalienable right of workers, non-workers or any other class or group to organize in a lawful manner for lawful purposes, to be pursued in lawful ways, has not to my knowledge ever been challenged by any employers' or other organization, nor interfered with by anybody. There is positively no issue on that question anywhere, and the attempt to make one of it by frequent high-sounding declarations is only a smoke screen intended to confuse the public with unfair implications. Whatever issue there is has to do with the interpretation and application of the right.

Interpretations of "Rights"

"Exactly the same thing is true of those other familiar issues, so-called—the right to bargain collectively and the right to strike or quit work, neither of which has ever been seriously contested by anybody. But there are those who contend that the right to organize does not imply the right to terrorize, intimidate, practice violence, and otherwise trample upon and interfere with the rights of others. It is only these peculiar interpretations and applications which are denied and resisted.

"The third of these spurious issues is the so-called right to strike or quit work. Only when in the exercise of that undisputed right is their interference with the right of others to work when, where, for whom, and under whatsoever conditions they choose, is there any serious denial of it. It is, or ought to be, common knowledge that the violence and lawlessness which attend most strikes result not from the exercise of the right to quit work, but from denial by the strikers of the rights of others.

"No message, in my opinion, could be sent out from the South to all the world which would be more reassuring of both its material and moral future than that this section still stands upon the Constitution of the United States, together with all of the rights, liberties and guarantees which inhere in the institutions set up by it; that this section will welcome capital from any source and will vouchsafe to it guarantees of protection against communistic, socialistic, or any other blighting influence which is inconsistent with the established American theory of political and social progress; and that its labor will welcome it as its friend and cooperate with it to their mutual advantage.

"I would therefore say that any policy for the South which did not have written in the boldest letters across the very top of it 'The Open Shop—The Unabridged and Unrestricted Freedom of Contract, and Complete Individual Liberty Within the Law,' would be a policy which could be expected neither to endure nor to bring us industrial success even while it lasted."

What's Wrong With The Cotton Tape Industry?

By "Old-Timer"

IN A RATHER severe condemnation of the tape manufacturing industry, the writer lays the ills of the trade to lack of cooperation and poor merchandising. Selling prices bear no relation to costs and too often are based merely on a competitor's action, he says. He points out that a cooperative plan several years ago involving an association was abandoned. He concludes that a good merchandising sense must be revived and some sort of cooperation effected.

THE lack of rhyme or reason in the merchandising of cotton tape is the largest single cause of the present chaotic condition of that market. Cost figures are thrown overboard in the constant press to grab the order away from a competitor. The consumer is lost sight of in the shuffle, and in the end is the only one that wins.

There are probably ten mills making common spool tape of the same construction and the same yarn. Production costs are nearly equal when making 1000 yd. spools with the same number of ends, 18 picks per in., and containing 20s-2 warps and 26s filling of first class yarn. The tape is made in standard numbers ranging from 11 to 35 inclusive, the numbers designating the number of ends in the warp. If properly woven, the various numbers should run the same weight per spool regardless of the maker.

Prices therefore, should be on a par as production costs vary little or none. In actual practice an entirely different condition exists. If one were to call up these mills for prices today, he would receive ten different figures ranging from $10 to $30 a case, depending on how badly the individual mill needed business.

The manufacturers are prone to heap blame on the jobbers for the present state of affairs, and to an extent this criticism is justified. The mill men, however, lose sight of the fact that they are the ones who manufacture the tape and quote the original prices. It would be well for them to set their own house in order before blaming the other fellow. The producers hold the whip hand and should be able to control the situation.

Unfortunately the majority of mills show general lack of merchandising ability. Selling prices are too often based on a competitor's price rather than on their own production costs. One is reminded of a story told some years ago dealing with Willie Hoppe in a billiard tournament. His opponent was worried and was playing Hoppe all through the game. Hoppe was playing billiards—and won. The tape manufacturers might learn from this to keep their mind on the game and forget their competitors. Such an attitude would doubtless bring improvement.

Curtailment of production would help the situation materially. The tape business is much overproduced, but all want to run full tilt. Mill men do not seem to realize that operating 50 looms, even at a small profit, is better than operating 100 at a loss.

In an attempt to secure better prices for tapes, many manufacturers are going in for direct selling, largely ignoring the jobber. This same trend is noted in other trades, but certain basic facts are often disregarded. Most important are the longer terms and greater credit risks incurred in selling to the retailer or cutter. The larger jobbers pay their bills on the tenth of the month, but many direct accounts will take from 60 to 120 days for settlement. Also there will be accounts to charge off as bad debts which will increase the costs of distribution.

In several cases jobbers' prices have been cut in this direct selling, and mills fight for the consumers' business in the same way as they did for the jobbers' orders. The net result has been zero from a profit angle. If anything, conditions became worse.

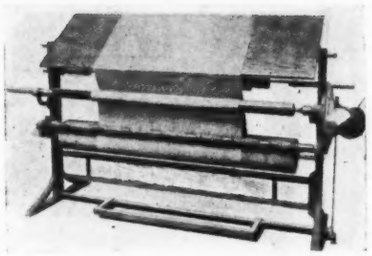
Cooperation seems to be an unknown quantity among tape producers. An association was formed several years ago, and for a brief time prospects were encouraging. At the initial meeting various promises were made and different arrangements drawn up. Mills were to sell to the association which in turn would act as the merchandising agent, reselling to the various consumers and jobbers. A research department was to be started in order to find and develop new markets for tapes. Had this association worked out as planned, the results would have been constructive and far reaching. Unfortunately there was no cooperation, and the idea fell through after six months.

There are several hopeful signs now apparent. A few mills are trying to get their price and are working along constructive lines of cost figuring. They are, however, in the minority, and there seems to be little possibility of a change for the better until all decide upon a course of good business practice.

●

[Subsequent to the writing of the above, there have been developments indicating that the tape industry recognizes its own need of cooperation and aims toward coordinate action. C. Marlin Bell, managing director of the Philadelphia Textile Manufacturers' Association announced Wednesday that he had been asked to arrange for the organization of a national association of the manufacturers of tapes, bindings and trimmings. Mr. Bell said the project was supported by more than 80% of the trade. A meeting will be held in New York City early in September to complete plans for the formation of the new group.

Under the plans as at present outlined, executive control of the organization would be vested in a committee of five, representing three divisions—the Philadelphia district, the Eastern section, and the South. The association would occupy itself with standardization of quality of product and selling terms, elimination of trade abuses and the reporting of buyers' unethical practices to the membership.—Editor.]



Standard Methods Proposed for

Examination of Finished Broad Silks

AT A recent meeting of the executive committee the Broad Silk Manufacturers' Division of the Silk Association of America, Inc., necessity for standard procedure for the examination of finished broad silk was pointed out, and recommendation was made that the methods submitted be referred to members of the organization for comment and suggestion. Establishment of a standard method is to enable the approximate duplication of results by a number of trained examiners working independently of each other. The methods proposed are as follows:

Methods of Examination—Finished broad silks should be examined in units of one yard. They may be examined over a perch or over a motor-driven inspection table, and the face side of the material shall be examined full width.

When the examination is made manually, the penalty (if any) for each yard is determined and noted. Thus upon the completion of inspection, there is available an accurate record of the total penalties. From this the grading may be computed as hereinafter described.

When a motor-driven inspection table is used, it may be equipped with a device which will record defects accurately on a continuous strip of paper. The paper is divided into small sections each representing a yard of material. The movement of this strip is synchronized with that of the material. As the examiner observes an imperfection in the material, he presses a button which records the nature and magnitude of the imperfection and in which yard it appears. Thus the appearance of the piece is made a permanent record, and grading may be easily computed.

Classification—Finished broad silks should be divided into three classes according to grading on a percentage basis, as follows: Class A, above 80%, good commercial delivery; Class B, 75% to 80% inclusive, subject to allowance but not returnable; and Class C, below 75%, seconds and returnable.

The allowance made for pieces graded under Class B above shall be as follows:

Above 75% to 75.5% inclusive	10%
Above 75.5% to 76% inclusive	9%
Above 76% to 76.5% inclusive	8%
Above 76.5% to 77% inclusive	7%
Above 77% to 77.5% inclusive	6%
Above 77.5% to 78% inclusive	5%
Above 78% to 78.5% inclusive	4%
Above 78.5% to 79% inclusive	3%
Above 79% to 79.5% inclusive	2%
Above 79.5% to 80% inclusive	1%

In any one shipment not over 25% of the delivery of any one quality should be in Class B. If the shipment should contain more than 25% of Class B, the buyer may return the excess which may be replaced within a reasonable time at the seller's option.

Determination of Percentages—The percentage grading of a piece of material should be computed from a yardage penalty deducted for imperfections as hereinafter provided. The total yardage penalty is first determined, and the percentage of this total to the yardage of the piece is then deducted from 100%. The result is the percentage grading. For example, a 60-yd. piece would be penalized as follows: Four major imperfections, 4 yd.; three medium imperfections, 1½ yd.; six minor imperfections, 1½ yd.; total, 7 yd. Then $\frac{7}{60} = 11.6\%$; $100\% - 11.6\% = 88.4\%$, the grading of the piece.

Penalties for Imperfections—Major imperfections carry a penalty of 1 yd., medium imperfections a penalty of ½ yd., and minor imperfections a penalty of ¼ yd. Sheer fabrics shall be assessed only one-half of the penalties stated above.

Imperfections and Irregularities Defined—Imperfections are defects which can be prevented under normal conditions or with reasonable care. Normal irregularities are defects beyond the reasonable control of the manufacturer or natural to any particular quality of construction. For the purpose of grading merchandise, such irregularities should at no time be considered as imperfections.

Classification of Imperfections—Vertical imperfections are those running parallel to the warp threads. A major vertical imperfection is one which affects ½ yd. or more in length in any 1 yd. A medium vertical imperfection is one which affects 4 in. to ½ yd. in length in any 1 yd. A minor vertical imperfection is one which affects one-half or more of the width in any 1 yd. A medium horizontal imperfection is one which affects 4 in. to one-half the width in any 1 yd. A minor horizontal imperfection is one which affects up to 4 in. in width in any 1 yd. of the goods.

Inspection Guide—Unevenness or shading horizontally or vertically in excess of normal irregularities of the construction should be subject to one-half penalties. However, it is to be expected that reasonable consideration shall be given to the quality under inspection, it being understood that lighter constructions should normally show more irregularities due to unevenness or shading than the heavier qualities.

Imperfections appearing within ½ in. of either edge should be disregarded. When not otherwise specified, it shall be understood that the material is to be examined on one side only, the face.

A major imperfection with one or more minor imperfections nearby or a group of minor imperfections is no more objectionable in many cases than a major imperfection alone. In either case, the same amount of cloth is affected and only one penalty shall be imposed upon the yard under inspection, the penalty called for by the imperfection of greatest dimension. Any defect of which the classification as to irregularity or imperfection may be questionable shall be referred to the chief inspector for final decision.

Results—The above method of classification actually

(Continued on page 75)

Reducing the Number of Neps in Worsted Top

By George Hendricks

FROM time to time the problem of neps in tops becomes the favorite topic of worsted men. Within the last year a considerable amount of heartburning has been taking place regarding spinners' complaints of neppy tops. There are spinners who are asking for tops with a guaranteed maximum of six neps per yard, and in fine merino tops this is considered an achievement. It is at times accomplished; occasionally the comber whose efforts have appeared wholly unsuccessful meets with a combination of circumstances which unexpectedly gives him the top he is so anxious to make. Then, a few days later, without any warning or any deterioration in the quality of the workmanship, he finds himself facing anew the old problem, with the top percher reporting to him that neps are prevalent.

Where are neps produced? They are not in the raw material—at least, not to the amount that they appear in the top. In the raw material there are fribby pieces, caused by the shearer not getting the right cut the first time and then foolishly making a second "cut and trim," as though the sheep regarded its own appearance! Certainly wools are more prone to cause neps than others, and among these are mushy wools, super-fatted or heavily yoked wools, and short fine wools.

Neps Formed in Wool Scouring

The cleansing of wool is important, as fine wools appear to be forming themselves into neps as they come from the wash bowls or drying machines. Too hot a scour is likely to give a physical disturbance in the solution which will by invisible means result in matted wool, difficult to card and usually productive of neps. An excessive amount of agitation to wool in hot soapy water should be avoided; any system of wool cleansing in which the wool is knocked about is sure to increase the comber's difficulties in ridding top slivers of neps. If wool could be freed from its impurities by dry cleaning, we should hear less about neps in tops.

Again, the prevailing method of adding soap and alkali to wash bowls is against the production of good work. Solutions which are too soapy tend to felt the wool; and after carefully making up the solutions for wool scouring further addition should be made in small quantities at frequent intervals from pipes with meters attached. The temptation for bowl attendants who use buckets is to add enough for two or three hours' work. This can only result in uneven wool cleansing, in addition to fiber felting immediately after bowl replenishment.

And in Carding

Most combers and spinners talk about "card-produced" neps, and there is something in it. Even if the card is considered blameless in this matter, it is well known that card slivers usually first reveal the presence of neps.

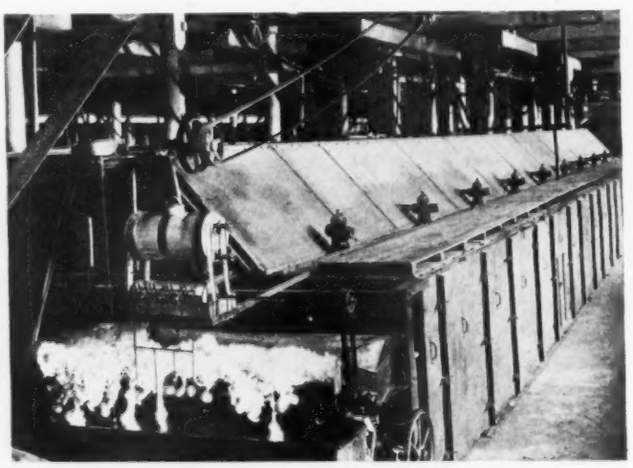
What are neps? As a rule they consist of a single fiber which has rolled itself up into a tiny ball, less than a pinhead—at least, that is the kind of nep usually met with in fine-wool tops. Neps of larger size appear in card slivers, but these are removed; the nep which most often defies the comber's art and the close-set pins is the least in size.

The right man in carding can make a wonderful difference in the results, but no man can wholly cover the deficiencies of the card. The delicate carding operation is performed by 40,000,000 wire points in one machine alone; and upon their setting, density, elasticity, foundation, condition, and speed depends the character of work.

The foundation of the wire is of much greater importance than is generally supposed, and to a certain extent the properties of the carding point and of the foundation are interdependent.

The foundation is certainly intended to keep the carding points in position, but that is true only to a limited extent. If that were its only function, we should have very poor carding conditions, because the wires have to be so elastic that good carding would be difficult. As a matter of fact, the foundation must be firm enough to insure that the wires return always to their proper carding action.

The next point is the question of the strain on each individual wire, and this strain is dependent upon the number of fibers which are under treatment between the carding surfaces, and upon the state of entanglement. It will be easily understood that there is more strain on the individual wires when carding heavily and when dealing with very dirty and felting material. It is very desirable to retain the carding angle as much as possible for the average strain on the wires, so as to ensure good carding, and the foundation has to be at least strong enough for that. But it is clear that the wires should give way as soon as overloading occurs, and the excessively large staple must be able to slip over the teeth. At the same

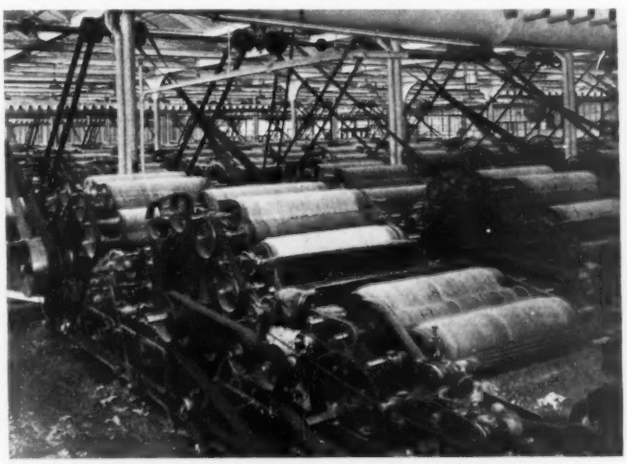


Some neps are formed in wool scouring

IN THE accompanying article is explained the formation and elimination of neps in scouring, carding, and combing. The square-motion comb, a machine not too familiar to American worsted manufacturers, is explained in some detail, in order that its ability to remove a high percentage of neps will be clearly understood.

time it must be able to attach itself to some other teeth in such a way that the mass is distributed over a greater number of teeth, thus reducing the strain on the individual tooth.

To allow the fibers to slip over the wires requires a certain elasticity of the wire, but this elasticity should come into play only under excessive strain. The wires should be strong enough to resist the bending tendency



Many neps are created in the carding department

of normal fiber masses. If the foundation of the wires were rigid, there would be a great strain on the wire, and the constant sudden stresses when each new fibrous mass comes into contact with the wire point would soon break the wire at the foot. This could, of course, be prevented by making the wire sufficiently elastic; but then the carding power of the wire would be practically lost. We get these conditions much better, and at the same time retain almost ideal carding conditions, by making the foundation elastic. This must just permit the wire to bend slightly under sudden strain; but this bending is bodily for the wire, while the elasticity of the wire is brought into play almost imperceptibly, and the chief strain is borne by the foundation. The foundation gives way fairly easily at first, but it offers more and more resistance through the growing compression of its own material as the wire is bent further back.

Must Retain Good Conditions

In all cases card clothing must permit the process of stripping to be effective without detrimental influences on the clothing. Another important point affecting the life of the clothing is the angle of the wire, which should be fixed so that good carding conditions are retained as long as possible. If one kind of card clothing, after having been ground down will give $\frac{1}{32}$ in. deeper action than another, the former is so much more valuable. This is true only if the original heights of the clothing are the same. There is usually a falling off in the quality of the carding after the card has run for a few years. The difference, however, is very small, provided that the wire is not so short as to jeopardize the carding conditions.

Card clothing must be tight on the rollers, and re-nailing should be undertaken if slackness is found. Card wires should be kept free from accumulations which not only produce neps by not giving wool room enough to work in, but also disturb the very necessary elasticity of the wire.

The wire points need to be ground frequently—say every fortnight for workers, strippers, and swifts, while the doffers should be constantly in contact with a strickle. Grinding is much too harsh a term for this work of sharpening up the wire points; the operation is very delicate, and probably the men who get the best results use their ears as well as eyes in the work.

Card-roller setting is the last word in skillful carding, but no amount of gaging will cover blunt wires, slack clothing, or wrong density and thickness (or elasticity) of wires. Delicate setting cannot be attempted if the card rollers vibrate.

Fine wools should be carded with the final rollers set at 36 gage. To obtain this setting, every roller must run perfectly true, the card clothing should be well fastened, and the width of the card should not exceed 60 in. Other settings should be arranged with this final one in mind and progressive opening of the wool followed.

The effects which moisture, heat, and oil have upon the wool during carding are as follows: Oil makes the wool soft, flexible, and the fibers slippery, so that they part from each other without breaking. It also loads the wool and thus reduces its tendency to fly. Moisture produces the same effect but in less degree. When heat is applied to the material, both the oil and moisture soften the fiber and increase its flexibility.

Carding Direct from Last Squeeze

Good carding can be accomplished and comparatively nepless slivers made by carding wool straight from the good sound nip at the last squeeze head, with heat rising in the card from two steam-heated lickers-in and cannons, four to six, distributed between the second licker-in and the second swift. Oil is more necessary with dry wool than wet, if only to lay the fibers and prevent their accumulation on worker and stripper bearings.

Another point to watch is that the wool grease is effectively removed in the cleansing process. More than one firm has been caught napping in this matter; and while the carder was doing everything possible to reduce the neps, his efforts were all in vain because of the grease in the wool binding the fibers, making them work heavily instead of lightly, filling the card wires with grease, and preventing the free working of individual wool fibers. The card should not be overloaded.

When neps are developing in the card, it is necessary

to set as closely as possible. In order not to treat the long material too severely, the doffers should be run faster without reducing their working power an appreciable amount. These very fine neps are short, and the quicker speed of the doffer gives considerable working power on the neps. This is because of the large amount of cylinder surface which passes over them while they are on a quickly moving worker or doffer. Sharpened wires are also very necessary in order that there may be no slipping of the material to cause rolling, as neps are often a sign that rolling is taking place.

Backwashing can pass. Neps are not made in this machine, unless too hot a scour is used or the faller pins are hooked or split at their extremity.

Combing Presents Greatest Problem

Probably the greatest problem just now is the removal of neps in combing, and combers are asking which is the best machine for this purpose.

There are three possible machines for combing fine wool—the Noble, square motion, and rectilinear—and the merits and demerits of each are being freely discussed in trade circles. In England and the United States, the Noble comb has achieved a fair amount of popularity, and no machine can gain that position without something favorable in its principle of working and the character of its products. Yet of the three combs named it is most open to criticism so far as neps are concerned. A machine may have a long run and be very satisfactory for certain types of yarn and cloth, but changing conditions may necessitate a review of the situation and a reassessment of the worth of the product. Wool goods that are being sold today for ladies' wear have to enter into competition with silk and rayon goods, and wool fabrics are being demanded today of 4-oz. weight and under. These require in their construction fine yarns and open weave, in which the smallest blemish lies on the surface and, like a speck of dust in the eye, fills the vision. For this reason, combers are asked to get rid of neps, and the voice is insistent. It will cost some combers thousands of dollars to get rid of them, but it will pay in the end.

There are three drawbacks to Noble combing. (1) The small space between the circles, where a short length of fibers may lie uncombed. (2) The quick wearing down of dabbing brushes. (3) A combing action which is unrepeated.

The critical part of this method of combing is where the circles are close together. The length of fibers actually between the two circles at the point of convergence cannot be combed in this process. For this reason the circles are set as close as practicable, which in most cases is between $\frac{1}{16}$ and $\frac{1}{32}$ in. This clearance allows good running for any slightly untrue setting and for vibration. Even with the close setting, and after placing the outer row of pins on the inner circles in an oblique manner to cover the distance between them, certain neps may take up a position between the circles and enter the top sliver, to its great detriment. This fact makes sweet and steady running of circles, quick and efficient dabbing with good brushes, close pinning, and accurate setting, of constant importance in Noble combing.

Quick and Efficient Dabbing

This type of comb demands very quick and efficient dabbing where the circles meet, and the operation may be said to be a vital one, demanding care and precision of a high order. At the present time any dabbing motion which does not allow a speed of at least 800 dabs per minute may be considered slow and a cause of low production. The trade is desirous of obtaining one with a safe speed of 1,200 to 1,600 daps per minute, where brushes are used, or some form of dabber in which brushes and their expensive upkeep are eliminated. Recently a combination of dabbing brush and retaining knife has been proposed, and it is thought that an arrangement of this kind may help until a more perfect one is found.

The need for quick dabbing is in order to allow combers to produce a maximum amount of top, based upon their ability to run comb circles at a speed of 700 lineal inches per minute, and yet to maintain a dabbing-brush speed sufficient to give one dab for every $\frac{1}{2}$ in. of circle movement. Dabbing can only be effective at one point—viz., exactly where the circles converge. Slow dabbing means dabbing wool at points other than this, and wool taking up a position between the circles and not in the pins escapes the combing action.

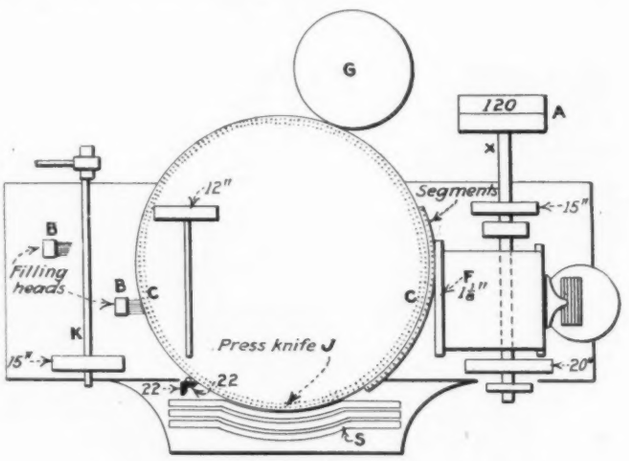


Fig. 1a. Plan diagram of square-motion comb

The quick wearing down of dabbing brushes is also productive of neps. No brush maker can guarantee his brushes to last any given length of time. It all depends upon circumstances—the character of the wool, the thickness of the slivers, and the care in setting the vertical position of the brush and resetting it after it wears down a little. Combing overseers should be constantly in attendance on the machines, and by resettings and circle clearing they should give extended life to brushes and comparative freedom of top slivers from neps.

The work of the Noble comb is done quickly and well, but only one attempt at combing is made. If the work is not thoroughly done, if all parts are not correctly set, if pins are missing or set in too-open formation, successful work is not accomplished. This is in contradistinction to square-motion combing, in which repeated pin treatment is accorded the wool with a corresponding degree of surety.

Square-Motion Comb

The square-motion comb was brought to its present state of efficiency by Isaac Holden (afterward Sir Isaac Holden), founder of the firm of Isaac Holden & Sons, Ltd., Bradford, England, the largest wool-combing establishment in the West Riding of Yorkshire. In England this machine is known as Holden's comb, but on the Continent, where it is extensively used, it is termed the Lister comb, because its principle of action was conceived during a period when Lister and Holden were in partnership in France and it was patented in the name of Lister.

It is described as the square-motion comb because a set of fallers works in a square and effects most of the combing of the material. The machine is more complex than the Noble or nip combs. Dealing with similar classes of wool, it can equal the Noble comb with respect to output of top.

The combing result, both in clearness of sliver and in the spinning property of the fibers, is claimed to be superior to any other type of wool-combing machine. The machine dates back to 1846, though not in the same form in which it is now constructed. Improvements in mechanisms and settings of parts have gradually brought it to its present high state of efficiency.

The qualities of wool for which it is best suited are short and medium botanies and fine and medium crossbreds. It differs from the nip comb in that no combing is done until the fibres have been fed onto the circle of the machine. Special mechanisms, termed "filling heads," are provided to feed tufts of uncombed wool onto the

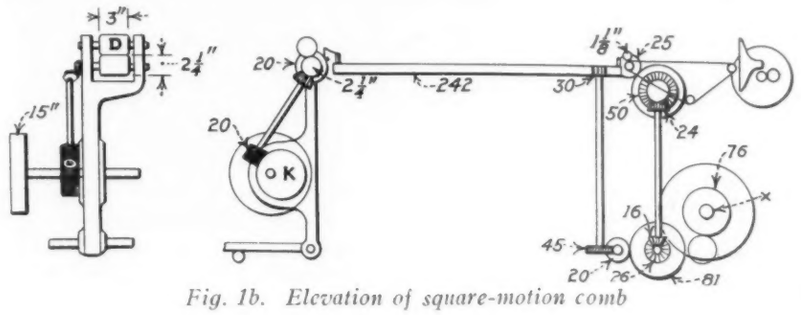


Fig. 1b. Elevation of square-motion comb

CIRCLE PARTICULARS

	Rows of Pins	Shape of Pins	Pins per Inch	Segments; Pins per Inch
Botany.....	2	Round or flat as	38	52
Crossbred.....	2	required.	30	45

circle. Well-prepared slivers, about twelve in number (varying with the thickness of the slivers), are fed into the machine from balls. No special preparation of the slivers, such as punching, is necessary. The comb is continuous in its working action, and therefore considerably superior in output to the rectilinear or French comb.

Its main parts, to be discussed in order of their entry into combing action, and their position and relationship, are indicated on the plan diagram of the machine in Fig. 1a. They consist of filling heads, large circle, press knife, square-motion fallers, drawing-off rollers, segments, and noil knives. Where the best ratio of top to noil is required, a "backings" motion (*G*, Fig. 1a) is included.

Filling Heads

Feeding consists of placing uncombed tufts of wool on the circle. This is done by filling or feeding heads *B*, consisting of two sets of narrow and small-diameter rollers revolving slowly and drawing the uncombed sliver from the balls. Small brushes support the sliver as it leaves the nip of the feeding rollers. By means of special gearing, the filling heads work backward and forward alternately in circular orbits to and from the main circle. In retiring from the circle, that part of the stock projecting in front of the feed rollers is lashed on the pins of the circle in small tufts, most of which form a fringe hanging outside the circle. Approximately one-sixth of the tuft is in the circle pins, and five-sixths forms the fringe hanging outside the circle. The length of the tufts placed on the circle pins depends on the nearness of the approach of the filling heads to the circle, which may be set so as to suit all classes of wool within the capacity of the machine. The tufts are placed on the circle in echelon order, and the amount of overlap depends on the speed of circle relative to tufts fed on in a given time.

When the filling head is nearest the pins of the circle, the distance between the nips of the feed rollers and the pins of the circle should be equal to the average length of the fibers. Detail of feed rollers: width, 3 in.; diameter, 2¼ in. for Botany and 2½ in. for crossbred.

The function of the circle *C* is simply to carry the wool around to the several mechanisms working on the outside of it. It receives from the filling heads tufts of wool assembled in echelon order, about six deep, and conveys them to the square-motion fallers, where, at about five-sixths of the tuft is hanging outside the circle in fringe form, all but the one-sixth in the circle pins can be stroked and combed in the faller pins. After combing, the tufts are conveyed by the circle to the drawing-off rollers, which complete the combing by clearing the circle of all fibers going into the top sliver, leaving the noil fibers to be removed by lifting knives.

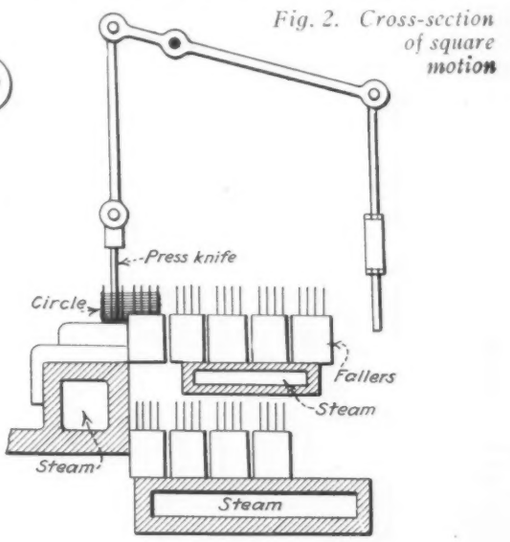


Fig. 2. Cross-section of square motion

The circle is heated by means of steam in a circular cavity immediately underneath it. The temperature of the pins is maintained at about 120° to 140° F. The heating of the pins and wool has an important effect in securing economical combing results. Temperature was formerly higher than this; but, with better drying at backwasher, less heat is required.

In order that the tufts of wool may be held in the circle and their withdrawal during the combing action of the square-motion fallers be prevented, the ends of the tufts in the pins are firmly held by means of the press knife *J*, which presses on the ends of the fibres resting in the pins and allows the fallers repeatedly to stroke and comb the extended fringe, drawing away only the short, loose fibers, neps, and vegetable matter not under control. The press knife is ingeniously jointed, allowing it to oscillate opposite the square-motion fallers, travel with the circle, control and hold the tufts during faller action on the fringe, and spring back into its initial position during the momentary stop which occurs between the bringing of each faller into combing action. Pressure of press knife must be varied according to load.

Square-Motion Fallers

The square motion (Fig. 2) is a specially constructed kind of gill box. The fallers are operated by cams

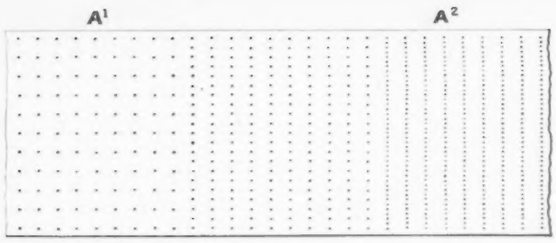


Fig. 3. Pin setting

FALLER-PINNING DETAILS, FIG. 3

	Set over longitudinally 25¼ in.; transversely, 1¼ in.						
Botany:							
Set-over sections	8½″	2½″	2½″	2½″	4¼″	2½″	2½″ = 25¼″
Rows of pins per inch (lengthwise of faller)	8	8	8	8	8	8	8
Pins per inch in row	10	15	21	24	30	26	7
Crossbred:							
Set-over sections	8½″	2½″	2½″	2½″	3½″	2½″	1½″ = 25¼″
Rows of pins	8	8	8	8	8	8	8
Pins per inch in row	10	14	20	22	28	24	6

and work intermittently, rising from the lower steam chest to the upper one as close as possible to the periphery of the circle. In this way the pins of the fallers in their upward movement pierce the fringe of fibers suspended from the circle. In moving backward, the fallers comb the fibers and remove robbings and vegetable matter. This method of short-fiber elimination gives to this machine its undoubted efficiency. The fibers receive considerably more pin treatment than in any other type of machine; and this, combined with other factors, gives the fibers a much superior smoothness and bloom.

The fallers are curved over part of their length, giving them more than a tangential contact with the circle. Heat is supplied to them by the steam chests on which they move.

The true principle of combing from light to severe is observed in the peculiar pinning of the fallers. Unlike those in an ordinary gill box, in which the pins are equal in diameter and density, the pins in square-motion fallers are varied over their whole length. Open setting prevails at the ends of each faller and there are various intermediate finer settings.

Figs. 3 and 4 will give an idea of the pin settings adopted. One type of setting is indicated at Fig. 3, in which the pins in each faller are set in a straight line across the faller, the rows of pins being equally spaced. In this case the variations in density of pinning are made by increasing the number of pins across the faller, as indicated at *A1* as compared with *A2*. In an alternative type of faller, Fig. 4, the pins of one row are placed opposite the spaces of the preceding row as far as possible, thus necessitating the variations in pin density being made lengthwise of the faller, and not transversely.

The removal of the backings from the fallers contructed on the principle of Fig. 3 is by means of thin steel knives, wihch are inserted automatically between the rows of pins each time the faller comes out of combing action. The thickness of the knives varies according to the space between the rows of pins across the fallers. The refinements in adjustments necessary to accomplish this work without damage to the pins will be appreciated. From the fallers of the type in Fig. 4, the backings are removed by means of revolving brushes operating on them when out of combing action.

Drawing-Off and the Segments

The completion of combing is effected by drawing-off rollers *F* (Fig. 1) set at a tangent to the circle. In their revolutions they grip the tips of the fringe of fibers just treated by the square motion fallers, and draw them into a continuous sliver of combed fibers, free from noil, vegetable matter, etc.

To ensure the complete removal of noil and neps from wool, it is essential that the fibers should be combed over their whole length. Without some auxiliary device it is probable that a short length between the outer row of circle pins and the innermost row of square-motion faller pins would remain untreated. To obviate this, segments are introduced to ensure the proper clearing of that portion of the tuft.

The segments may be described as a complete inverted circle carrying three rows of pins, about $\frac{1}{16}$ in. larger in diameter than the main circle and cut into twelve pieces or segments. Each of the segments is carried round by pillars, on which, and by means of suitably positioned inclines, they rise and fall according to requirements. For about three-quarters of their revolution they are 6 in. above the circle and out of action, but just before they come opposite the drawing-off rollers, each segment in turn drops down and places its pins close to the outer row of the circle, thus enclosing that part of the tuft which has been untreated by the square-motion fallers. By this means not only is the full length of each fiber combed, but the tail end of the tuft is supplied with extra rows of pins to ensure the more satisfactory combing of that part which has rested among the circle pins and has not been operated upon by the square-motion fallers.

The fibers too short to reach the drawing-off rollers remain on the circle to be either removed as noil or further treated by backing motion *G*.

Drawing-off by horizontally set rollers forms what is termed a "henwing" sliver. The fibers delivered by the drawing-off rollers pass around a smooth copper rod, positioned diagonally across the delivery sheet, and through a revolving funnel. As the longest fibers are at the opposite end of the roller to the short ones, by the action of the funnel the latter are assembled in the center and the long fibers on the outside of the resultant sliver, the intermediate lengths being disposed between these in order of dimension. Combing may finish at this point, in which case a good spinner's top is produced at the cost of a high percentage of noil. The noil is removed from circle *C* by means of noil knives. The noil or backings taken from the square-motion fallers are returned for recarding.

Backings Motion

A device used on the square-motion comb to effect a better tearage and ensure the minimum of fibers passing

(Continued on page 39)

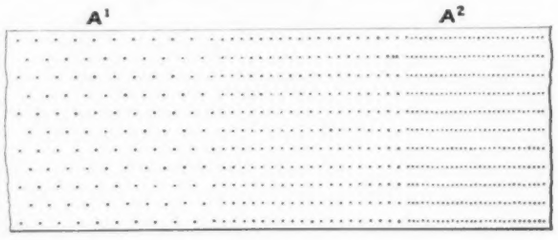


Fig. 4. Pin setting

FALLER-PINNING DETAILS, FIG. 4

	Set over longitudinally 23½ in.; transversely, ¼ in.						
Botany:							
Set over sections	6 ″	3½″	4½″	3½″	1½″	4½″ = 23½″,	
Rows of pins per inch, front to back	10	10	10	10	10	10	
Pins per inch in row	10	16	26	36	40	10	

Specifications for Fabrics to Be Rubberized

By S. G. Byam and L. R. Bailey

CONCLUDING their discussion of the specifications adopted by the proofing industry, the authors describe the effects of injurious chemicals in rubberized fabrics. Previous installments, which appeared in June 14 and 28 and July 12 issues TEXTILE WORLD, related to specifications for width, thread count, weight, tensile strength, fabric defects, and percentage of sizing material.

PROBABLY the most discussed portion of these specifications is the part which deals with the effects of injurious chemicals, and specifically those of copper. Until a year or two ago the harmful effect of copper which might be present in fabric on rubber coatings was unknown to many textile manufacturers, some of whom have supplied the rubber industry for years. It is not due to anything new which makes copper suddenly harmful to rubber, but to a better understanding, on the part of the rubberizers of what this effect is.

Rubber deteriorates in time due to the effect of oxygen upon its substance, increasing its resin content. Any material which accelerates the action of oxygen on rubber must therefore be avoided, and copper being one of the most active of such catalysts must be ruled out very completely. If it were practical to obtain all fabrics absolutely copper free, that would be demanded. This being impracticable, only as little as possible is permitted.

Practically all the remarks pertaining to copper apply to manganese; the latter, however, is probably more dangerous to rubber, though fortunately less often present.

The requirement pertaining to iron content has been inserted in the specification due to the growing feeling among rubber technologists that salts of this metal are not beneficial to rubber. Even iron oxide which has long been used as a red pigment is losing favor as a coloring ingredient because compounds containing it do not age as well as those using certain other red pigments. Granting that iron is not particularly good for rubber it must be admitted that insoluble iron such as red oxide is less harmful than ferrous or soluble iron. If iron is present in dyed fabric, it may be in the ferrous state and must be avoided if possible; but in view of its weaker action the tolerance is set as high as 0.1%, a limit that should never cause difficulty for the fabric dyer to attain.

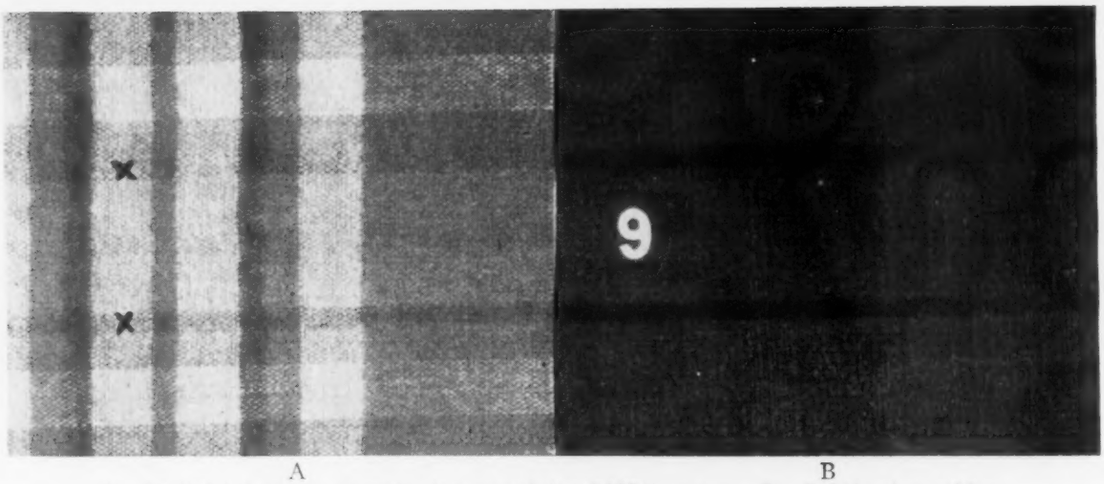
Injurious Chemicals—No section of any piece of goods intended for rubberizing may contain certain chemicals or ingredients known to be injurious to rubber above the limits set down hereafter.

	Auto Fabrics —Gray	For Auto Fabrics —Dyed	For General Proofing
Copper	0.001%	0.003 to 0.005%	0.002%
Manganese	0.0005%	0.001%	0.001%
Iron	.....	.....	1.100%

One textile manufacturer has objected to the copper limitation with the typical comment, "We have been dyeing, printing, and finishing piece goods for the converters to the raincoat trade for many years and until recently have had no complaint because of high copper or grease content in these fabrics. Furthermore, we have been under the impression until recently that cloth containing 0.01% or slightly more copper could be successfully rubberized." It is true that much fabric in the past contained copper and was successfully rubberized, but only the rubberizers have known how much was not successfully treated. Investigations carried on by the rubber industry as to why their goods failed at times brought out the fact that fabrics containing copper to the amount of 0.01% were almost sure to decompose in a few months and that any amount of copper in fabric over a few thousandths of one per cent was highly dangerous to the life of the product. A further comment frequently heard in connection with the copper limit suggests that with the technical advances made by the rubber industry and with the growing use of those valuable chemicals called "anti-oxidants," which add so much life to the product, something should be added to the rubber to offset the deteriorating effect of copper. Chemical research has added service life to rubber, but these developments do not change the catalytic effect of copper. If rubber products are to be produced to give the best quality possible, it is essential that every detrimental condition be reduced to a minimum as well as that every beneficial agency known be used to as great an extent as is practical. It is not reasonable to compensate for copper by other means if it is possible and practical to reduce materially the amount of copper.

In establishing the limits for copper and manganese stated above, consideration was given to the textile manufacturer's side of the question; and we are convinced that it is entirely practical to produce fabrics within the specified limits without undue hardship or extra cost. We know that some dyestuffs must contain copper because the manufacture of some of these dyes calls for the use of copper, and that these particular colors are necessary in order to obtain some shades that rubberizers request. But many dyes contain no copper and many others contain only minute quantities of copper which will be negligible in use. Recently some 28 dyestuffs which were being used regularly for fabrics to be rubberized were examined for copper. Of these 28 dyes, 17 were entirely free of copper, the balance containing from a trace to about 0.8% copper. Only a very few had enough copper to prohibit their use. The rubberizer does, however, have some responsibility in this matter, and he can cooperate with his dyer to help this situation, if he will, by the selection of shades. We ask that those who dye fabrics for the rubberizers do not hesitate to discuss this matter of choice of shade with their customers in such cases.

It will be noted that the specification on injurious chemicals begins with the statement, "No section of any piece of goods intended for rubberizing may contain certain chemicals above the limits set down." This has specific reference to yarn-dyed woven goods containing stripes of various colors. Such a fabric may show a copper content which averages within the limit, whereas certain threads of certain colors in themselves are very



A B

A. *Plaid fabric with red stripe* (x) *containing 0.007% copper.* B. *Fabric after rubberizing, showing decomposition of coating over red stripe*

high in copper. In a case like this decomposition of the rubber takes place along the stripe containing copper long before the balance of the rubber goes bad. Actual cases of this sort have been observed, though the condition was fortunately recognized through accelerated aging of the coated fabric in the oxygen bomb. The material in question was dry-heat-cured leatherette, calendered on a woven plaid of three or four colors. The fabric averaged less than 0.002% copper, but one stripe of red showed 0.007% copper. In the bomb the rubber decomposed above the red stripe within two days, while the rest of the material became obviously decomposed in the same way under conditions of normal storage in about eight months.

The fact that the copper limit for dyed goods for use in auto-top fabrics is from 0.003 to 0.005% copper is due to the general use of somewhat different type rubber compounds which do not react so readily to copper as those commonly used in the raincoat and general proofing lines. The limit for copper in gray goods is set low, because there should not be any copper present, though sometimes traces may get in from water or process equipment. Such cases are not common.

Test for Copper in Fabrics—Five grams (weighed to the first decimal place) of the fabric is ashed in a clean porcelain crucible. The ash is converted with 5 c.c. hydrochloric acid and one to two drops of nitric acid and boiled for one-half minute. The liquid is transferred to a 50-c.c. beaker and an excess of ammonium hydroxide is added. The solution is filtered (to remove iron and insoluble matter) into a 50-c.c. beaker and then made slightly acid with acetic acid. The solution is cooled and transferred to a Nessler tube, 1 c.c. of a 5% solution of potassium ferrocyanide is added, and the whole diluted with distilled water to the 50-c.c. mark. It is compared in the colorimeter with standards made in exactly the same manner as described, using known amounts of copper. A blank also should be run using everything as used in the determination except the fabric. A standard solution containing 0.002% copper is recommended. Fabric is rejected if it contains more than 0.002% copper.

When dealing with such small quantities as thousandths of one per cent copper it is necessary that the test methods shall be accurate. On account of the need for such tests being of routine nature it is highly desirable for the sake of economy that it shall be simple and short. Much analytical work was carried out to establish the accuracy of the method under the varying conditions that might be encountered in testing fabrics. It will be appreciated that an asbestos filter should be used for removing precipitated oxides or hydroxides, in view of the affinity cellulose has for copper, for the filter paper might, in spite of repeated washings, hold a considerable fraction of the copper. This affinity for cellulose clearly demonstrates the advisability of avoiding copper in the processing of textiles which are to be rubberized. When cellulose comes in contact with copper, it grabs on and does not let go readily. This makes it exceedingly difficult, if possible at all, to strip cotton fabrics of copper, if once present.

Test for Manganese in Fabrics—Ten grams of the fabric is ashed in a clean porcelain crucible. A dilute (1:3) solution of nitric acid is added and a few drops of a weak solution of silver nitrate. This is boiled to expel oxides of nitrogen and to remove chlorides. The solution is then transferred to a test tube and cooled under the water tap; 0.5 grams of sodium bismuthate are then added and the solution is heated. A very small crystal of ammonium oxalate is added to clear the solution. It is then cooled and an excess of bismuthate added. It is again heated, cooled, allowed to stand 30 seconds and filtered rapidly. If the filtrate appears at all pink, it denotes the presence of manganese. Fabric is rejected if it contains more than 0.001% manganese.

Determination of Manganese in the Presence of Chromium—If chromium is found present in the fabric sample during the determination of copper (its presence is denoted by the formation of a green precipitate on the addition of ammonium hydroxide to the copper solution just after dissolving the ash in sulfuric acid subsequent to the evaporation to dryness), the following method must be used in the determination of manganese:

Ash a 10-gram sample weighed accurately to the first decimal place, and dissolve in concentrated hydrochloric acid. Add 5 c.c. concentrated nitric acid and evaporate to dryness. Add 0.5 c.c. concentrated sulfuric acid and again evaporate to dryness. Dissolve the residue in 10 c.c. of water, add very carefully 0.5 gram sodium peroxide. Dilute to 20 to 25 c.c. with water and filter. Discard the filtrate. Dissolve the precipitate by pouring 10 c.c. warm dilute sulfuric acid over the filter paper and wash with water. Add 0.5 gram sodium bismuthate to the solution in a 50-c.c. beaker, let stand a few minutes and filter through an ignited Gooch crucible. Transfer the solution to a 50-c.c. Nessler tube and dilute to the mark. Introduce 5 c.c. of the standard permanganate solution, containing 0.0001 gram of manganese per c.c., and 10 c.c. dilute sulfuric acid into a Nessler tube and dilute to the mark. Compare the intensity of the colors of the two solutions in the colorimeter. 0.0001 grams of manganese is equivalent to 0.001% of manganese in a 10-gram fabric sample.

The bismuthate colorimetric method of determination seems adequately accurate. Possible errors may be encountered if chromium is present, but may be compensated for by modifying the method.

Grease—Not over 1% in goods intended for sulfur chloride cured rubberizing.

Not over 3½% in goods intended for dry heat cured

rubberizing. (Goods containing more than this amount may be accepted at rubberizer's discretion.)

In purchasing goods it will be stated to the supplier for which cure they are intended.

Test for Grease—Ten grams of fabric is extracted with carbon tetrachloride in the standard underwriter's extraction apparatus for eight hours. The solvent is then evaporated and the extract determined in the usual way. Limits: 1% grease permitted in cloth to be acid cured. Limits: 3½% grease permitted in cloth to be heat cured.

It has always been generally understood that oils and grease exert a deteriorating effect on rubber goods. The rubber film applied in proofing is usually very thin and is cured under circumstances involving a delicate balance of sulfur and accelerator with dry heat, or in a superficial way in the case of sulfur chloride. A softening agent applied to the surface of the rubber film can, of course, easily weaken it to a marked extent. The fact that grease, if present in a fabric, will contact with the under side of the rubber film constitutes a greater danger than otherwise, as its action may not be discovered until the rubber is entirely ruined. It is rather an anomaly that mineral and vegetable oils and greases are used as softening agents in rubber compounds with beneficial results to the product and yet we find that similar products exert harmful effects on the finished product. This condition is explainable through the fact that grease applied locally and concentrated at one place can affect that spot readily. We have learned, however, that not all oils and greases are harmful, particularly if not present in excess, and furthermore that tight cures (those based on a higher amount of combined sulfur) are affected less than softer cures. For this reason the tolerances for grease differ according to the type of material involved. It is conceded that the grease content of cotton fabrics can usually be kept within 1% and that the higher limit of 3½% for heat-cured goods provides no handicap of any sort. Rayon and wool fabrics tend to contain more grease than cottons, but still can be held easily within the higher limit. In connection with these tolerances for grease content we are not considering the natural oils and waxes of cotton as these are not generally harmful to rubber in normal amounts, and furthermore exist only in gray goods, being largely washed out of bleached or dyed fabrics.

Free Acid—Material shall contain no mineral acid or any salt capable of liberating free mineral acid. There shall be no foreign ingredients in fabric which will cause an appreciable loss in strength when heated for four hours at 260° F., due allowance being made for moisture content.

In general, acids are harmful to rubber in that they retard proper curing and tend to break down that structure of rubber. Furthermore acid in fabric will tender the fiber, thus reducing the strength of the product. Organic acids have only a weak effect on rubber and are usually rather harmless to fabric besides tending to volatilize and pass off if the material is heated. For these reasons one is concerned only with mineral acids in a practical way, thus hampering the textile operator if, at all, only to a slight extent, and permitting the use of acetic acid where necessary. Mineral acid may be determined by leaching out, though we are content to judge its amount by determining its effect, if present, by its action in tendering the fabric when heated under certain specified conditions.

Fastness of Dyeing—Dyed goods must not be affected by perspiration; must not crock or bleed; and, if specified, must not be affected by exposure to dry heat at 260° F. or to sulfur chloride fumes.

That rubberizing should be done to fabrics that have been dyed fast to perspiration and water and will not smudge or crock is not surprising. It is a matter of fact that although these requirements are important and must be controlled carefully for raincoat and some other specialized uses, there are often cases where they are of not too much importance. The rubberizer should always state the degree of fastness he needs, but it behooves the seller of fabrics also to inquire into these needs. It is felt that the requirement is sound and not too restrictive upon the dyer, and that the methods given for checking up on these conditions give a good measure of the degree of fastness needed.

Tests for Fastness of Dyes:

Test for Crocking—Rub the fabric briskly with a dry white cloth. If the color of the fabric under test is transferred to the white cloth, it is an evidence of crocking. Classify as "excellent," "fair," "poor," or "bad." Material classified as "poor" or "bad" is to be considered as subject to rejection.

Test for Bleeding—Immerse for one hour in a beaker containing about 100 c.c. of warm distilled water (120° F.) a 1-gram sample (equivalent to approximately 9 sq.in. of 300 fabric) of the cloth to be tested. Remove cloth from water and lay the wet sample on a piece of white nainsook. Press the two together. If nainsook is stained, it is an evidence of bleeding of the dye in the fabric under test. Classify as "excellent," "fair," "poor," or "bad." Material classified as "poor" or "bad" is to be considered as subject to rejection.

Perspiration Test—The test solution consists of 25 grams of 100% acetic acid and 100 grams of common salt made up to one liter with water.

The fabric to be tested is saturated with this solution, laid on a piece of bleached sheeting and allowed to dry at a temperature of not more than 100° F. This procedure is repeated twice. Note bleeding on white material and classify as "excellent," "fair," "poor" or "bad." Material classified as "poor" or "bad" is to be considered as subject to rejection.

Among the many comments on this specification that have been received we find a dyer that is inclined to take the fastness requirements very literally, interpreting it to mean that only vat colors would pass. This, of course, is not intended and we agree with his opinion "that sulfur colors will not give trouble" in a large majority of cases. There are probably cases where vat dyeing is essential, and we feel confident that such needs will be thoroughly gone into by both dyer and rubberizer before any processing is done. It is the intent of the rubberizers in making up these specifications to leave many specialized questions to be covered separately in the purchase contract.

The rubberizers of today are all in a position to check up or to have checks made on their raw materials and finished products, and it seems beyond question that a similar condition should exist throughout the textile industry. There is responsibility on the rubberizer to see that he is getting what he has asked and paid for, but there is possibly a greater responsibility upon the textile manufacturer to be sure that he is furnishing a proper material. It is believed that a specification of the sort under discussion is one way of bringing these two interests together intelligently.

Acknowledgment—The writers appreciate and acknowledge with thanks the data and information received from the following: George Flint, of the Rubber Manufacturers Association; Messrs. MacGowan and Johnson of The Cotton-Textile Institute; Dr. R. E. Rupp of the Pacific Mills; A. L. Brown, of E. I. du Pont de Nemours & Co.; and Standards Committee of the Rubber Proofers Division, Rubber Manufactures Association.

Dyeing Glove Silk *with* Logwood Black

By T. P. Sheridan

LOGWOOD black is employed for dyeing glove silk where fast shades and fullness of tone are requisite. In addition to giving this desired richness of shade, the logwood-black process also imparts a high percentage of weighting to the fabric. While the application of logwood is a somewhat lengthy procedure and is considerably more expensive than direct-color dyeing, the superior results obtained more than justify the use of this material on glove silk.

The danger of chafing glove silk was described in a previous article (TEXTILE WORLD, May 31, 1930) and needs no further discussion at this time. To minimize this danger it is preferable that fabrics of this type be processed by the hand-reel method, rather than on power dyeing machines. The equipment needed for dyeing logwood black consists of three vats, squeeze rolls, and a suitable extractor.

Equipment for Dyeing

The vats should, of course, be large enough to take care of the maximum size batch. We shall presume this to be 50 lb. The first vat is the iron-liquor vat. This need not be as large as the other two, but should be of sufficient size to permit the goods to be thoroughly immersed when they are given the iron liquor bath. In fact, it is more economical to have it just the proper size and not too large, because a large vat will require more of the ingredients than are absolutely necessary to bring the liquor to the correct specific gravity. For 50-lb. batches—5x2x2½ ft. is about the right size. The tank should be constructed entirely of cypress wood, having no lining of any kind. No metal should come in contact with the iron liquor. Rubber-covered squeeze rolls should be attached to one end. These should be placed in a position most convenient for passing the goods through when the iron process is over.

The other two vats should be large enough to assure plenty of room for working the goods during rinsing and dyeing. About 8x2x2½ ft. is the proper size for these vats. They also should be built of unlined cypress, and equipped with a removable monel-metal steam ball. In place of a steam ball there may be used a perforated steam coil of the same metal, which can remain in the vat during the process. It should, however, be placed behind a false end to prevent the goods from coming in contact with it. A coil is usually preferable because it does not have to be removed after each use of steam, and allows quicker heating of the water by permitting more steam to enter.

Scouring and Mordanting

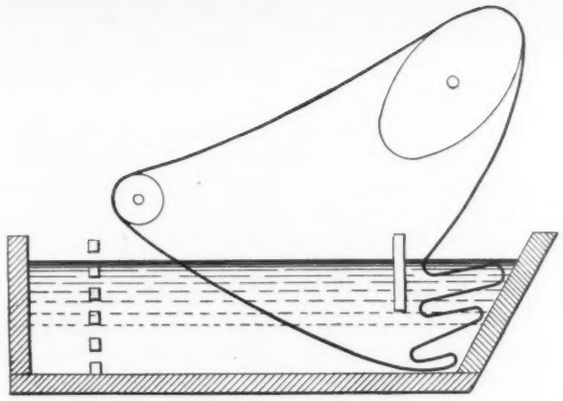
The goods are first thoroughly cleansed of grease, oil and dirt. This is done by giving the batch a run in a hot soap bath and applying a solvent to the grease and oil spots which the soap will not take out.

The bath is prepared by dissolving about 20 lb. of olive-oil soap in a quarter-filled vat of soft water. The vat is then filled with soft water and the temperature raised to 140° F. After working the goods in this for 20 or 30 min., keeping them well spread out on the reel, they are passed slowly over the reel and examined for spots that the soap has failed to remove. To remove these spots rub on a little bar soap or apply a solution of equal parts of sulfonated olive oil (sulfonated castor oil will do) and carbon tetrachloride, and give a good rubbing between the hands. Then raise the batch from the liquor and bring the temperature up to 180° F. A 10-min. pass through this should cleanse the goods sufficiently. Then rinse in two waters, the first at 180° F., to which has been added a pint of ammonia; and the second at 120° F. Both rinses should be with hard water.

It must be noted here that every bit of soap must be removed from the cloth before entering it into the iron liquor even if it is necessary to rinse a couple more times. After the required number of rinses, extract lightly; say, a couple of minutes after the extractor has reached full speed. The goods are then ready for the iron-liquor bath.

This nitrate of iron solution is prepared by adding nitrate of iron and soft water to the iron-liquor vat until a specific gravity of 18° Tw. is reached. At times, this nitrated iron comes from the chemical manufacturer with a thick sediment at the bottom of the barrel. A little stirring or shaking of the barrel will cause this precipitate to become suspended throughout the whole solution. Precaution must be exercised to see that this substance does not enter into the mordant bath. It will cause a lot of trouble and may sometimes ruin the goods by smearing them in such a way that it will be impossible to remove it. When a barrel of iron nitrate contains this precipitate it must be strained through a fine cloth before employing it. When the solution has been raised to the desired specific gravity, the goods are entered. They should be well spread out, and folded into the liquor in layers.

The size of the iron-liquor vat given above will safely mordant about 50 lb. of material. The batch is sunk in this liquor for one hour. After one-half hour, however, the batch is raised and poled to make sure that the goods are being penetrated properly. Sometimes, they will cling together in such a way that even penetration is impossible. The poling at the half-hour point will remedy this. When the full hour is up, one end of the goods is raised from the liquor and passed through the squeeze rolls, and then to the rinse vat. Much time will be saved by having the rinse vat close enough to the iron liquor so that the goods can be passed through the squeeze rolls directly into the rinse water. Five cold-water rinses should be sufficient to take out all the excess iron; but a sixth water, and even a seventh, may be necessary should



Oval-reel machine designed for processing silk fabrics

the fifth rinse water show a brownish color. All excess iron must be removed from the goods before dyeing.

Two-Bath Method

There are two processes for dyeing, both of which result in satisfactory work. The first method to be described will give a much more brilliant shade, having sort of a deep blue-black tone; the second will give a jet black, a little on the brownish cast.

The first method is called the two-bath process. It is the most widely used by discerning glove-silk men, and while a long process and, therefore, not economical, results in better dyeing.

The liquor is prepared by dissolving 3 quarts (about 10 lb.) of fustic paste in a vat one-quarter full of boiling water (soft water). The vat is then filled to within a few inches of the top with soft water; and the temperature raised to 170° F. Any scum that may come to the surface is removed. The goods are then entered and worked in this liquor for 30 min., keeping them well spread out to prevent twists that might retard or prevent penetration. The batch is then sunk for 10 or 12 hours —overnight will do no harm, if it is more convenient. Care should be taken to see that the air bubbles are punched from the goods when sinking; because the batch must be entirely immersed for the desired length of time of the process. If any of these bubbles carry the cloth above the surface of the liquor, and it is allowed to remain there for a couple of hours or so, a spot will result in the finished material. When the batch has been given the necessary processing in the fustic bath, it is raised from the liquor by spooling up on the reel. The vat is then drained. Two rinses, one at about 110° F. and the other cold, will be found to be enough after this process.

For the logwood liquor, first fill the vat about a quarter full of soft water and heat to the boil. Next 30 lb. of olive-oil soap are cut up into it and dissolved. Then add 6 quarts of logwood paste (about 20 lb.) to the boiling soap liquor, and continue the boiling until the logwood is completely mixed throughout the liquor. The vat is now filled with soft water and the temperature raised to 170° F. Work the fabric in this for 30 min.; sink for ½ hour, and work again for another 30 min. The same precautions regarding keeping the fabric well spread out and eliminating air bubbles, as was advised for the fustic bath, should be taken here. There are four rinses following this process. The first three should be with soft water, with temperatures of 150°, 130°, and 115° F., respectively. The last rinse should be with hard water heated to about 115° F. To this add from 1 to 2 quarts of 56% acetic acid, according to the scroop required in the finished product.

One-Bath Method

The one-bath process is not such a lengthy method as the one described. It is, therefore, more economical. For that reason, and because it gives a black suitable for some of the glove-silk trade, it is preferred by some dyers to the longer two-bath process.

To dye by this method fill the vat partly full of soft water as usual. Dissolve in this, by boiling, 30 lb. of olive-oil soap. When the soap is thoroughly dissolved, add 10 quarts of logwood paste (about 35 lb.) and continue boiling until it is mixed thoroughly with the soap liquor. Now, slowly pour into this 3 quarts (about 10 lb.) of fustic paste, stirring constantly while adding the fustic. The whole is then boiled for 10 min. or so, allowing it to foam up as much as possible without overflowing. The vat is then filled with water as before, and the temperature raised to 170° F. Skim off well; and it is ready for the batch. The goods are first worked in this for 30 min. They are then raised; and the temperature of the liquor taken. Should it be below 160° F., it is advisable to heat it again to 170° F. The batch is then sunk in this bath for 1½ hours. After about 45 min. it is advisable to work the goods a little with a pole to insure proper penetration When the full time is up, the batch is worked over the reel for 15 min. before rinsing. In this process the method of rinsing is a little different from in the other. The first rinse is the same, soft water at 150° F.; the temperature of the second is also the same, 130° F., but has in it about 8 oz. of ammonia; the third and fourth are likewise similar, a soft water at 115° F. and a hard at 115° F., there being one exception, the last water has, in addition to the acetic acid, 2 oz. of sulfuric acid.

Reducing Neps in Worsted Top

(Continued from page 34)

into noils is termed a "backings" motion. Its position on the machine is indicated at *G* in Fig. 1a. It consists of a small circle, 16 in. in diameter, carrying one row of pins only (10 pins per inch), placed in inverted position outside the main circle and revolving in the opposite direction. Its downward-pointing pins are exactly over the main-circle pins. Where this device is employed, the noil (the fibers left on the circle after drawing-off) is not cleared from the main circle, but comes round to the small inverted circle, and a small brush, oscillating vertically very rapidly, transfers it from the main circle *C* to the small inverted circle *G*. What wool was on the inside of the main circle is now outside the small one; consequently all the long fibers previously inside the large circle are now outside the small one.

A pair of drawing-off rollers set close to the backings circle *G* now draws the longest fibers away. These are formed into a lap around a felt or leather sheet. Periodically the laps are removed and returned for recarding in the hope that next time they will go directly into the top sliver. With the backings motion *G* in operation, four subdivisions of the material are made: (a) short fibers taken from the square-motion fallers and returned for recarding, (b) backings left on the circle after drawing-off has taken place and retreated in backings motion *G*, (c) robbings extracted by backings motion and returned to carding, and (d) true noil from backings circle *G*.

OVERSEERS' ROUND-TABLE

THIS department offers a new subject for discussion each week and gives readers' comments on problems introduced during previous weeks. The subject which was opened four weeks ago is closed this week and a summary of contributed ideas is given on opposite page

◆

Rewards and Penalties for Varying Grades of Work

Editor, Overseers' Round-Table:

ANY MILL that attempts to fine workers for inferior work is not progressing, as this is one system that should be eliminated.

In one large silk center this system was in vogue just a few years ago. One case was brought to court where it was ruled unlawful and stopped immediately.

There is hardly a worker who does not try to produce good work and it must also be considered that there are times when the machinery is mostly at fault. Almost all inferior work is produced by the same class of workers and these should be immediately replaced.

I am in great favor of the bonus system. Under a capable head, experienced in determining the different gradings, wonderful results can be obtained in the production of better cloth. Let us forget the fining system. JOHN PICONE,
Supt., Heck Silk Co.

Editor, Overseers' Round-Table:

THE QUESTION of rewarding and penalizing good and bad work devolves itself into one of mutual understanding and cooperation. , It is a trait of human nature to deviate from economical paths when working for another. In order to curb this evil what better method could be inaugurated than a system of penalties for imperfect work?

Having satisfied ourselves that the fault is due to carelessness on the worker's part, and not in any way a mechanical defect, a fine commensurate with the loss incurred is both just and desirable.

On the other hand, good work should be acknowledged in some tangible form, not only as an inducement, but also as a means of showing genuine appreciation. C. ROBERT.

New Machinery Brings New Problems

Editor, Overseers' Round-Table:

REGARDING YOUR question of whether experienced help should be brought in to operate the new type of machines, or the old workers trained to take over the work. In the majority of cases the best old workers should be trained on the new type of machinery.

We all know that new types of machinery and rearrangement of the work are eliminating part of our workers. Those who are eliminated by the above two causes are, naturally, not the best help, but they are human beings and have to live. The same thing is going on in every other industry. With keen competition, it is necessary that we have 100% efficiency and loyalty from every employee to make a success, and we can't get it by displacing old employees, who have been loyal to the company. with new ones.

JAMES L. TURNER.

Who Should Set

"OUR discussion of who should hire the help brought out so many points of value," Superintendent Chase addressed his weekly overseers' meeting, "that I thought we might well attack the problem of who should set the rates of pay. In many of the departments of a mill the rates are standardized, but there are also departments, and off hand I would name the dyehouse as one, where the work is varied and there is some leeway in what wages are to be paid. It is true that many factors, such as the rates of other mills, have to be considered, but I believe it is also true that there are many jobs where there is quite a bit of judgment needed to set the rate.

"Now, leaving out of consideration standardized jobs which have standardized rates, do you think the management, the super or the overseer should make the decision on wage rates?"

"By the same line of reasoning that led me to say the overseer should hire the help," Bill spoke up, "I would say that wherever there is any question about rates of pay the overseer should be allowed to make the decision. I believe that one of the errors of modern business methods is to have too much system, and not to leave decisions to the man who is really concerned and knows all about the problem. In the case of rates of pay the overseer usually knows the worker and what he can be counted on for. Some men are more valuable than others and the overseer helps both his department and the mill by giving the superior workers a little more an hour.

"Where there are piece rates the good worker makes the best pay anyway, but here also the overseer, knowing the working conditions, should set the rates, within the restrictive limits set up by outside factors. The more decisions which are left to the overseer in dealing with his department the better, in my estimation."

"Once more I fail to agree with you, Bill," Pete laughed as he rejoined, "and I'm glad of it, for that's the way to bring out ideas. I think that the advantage of having the super handle all questions

The Question of Smoking in a Mill

Editor, Overseers' Round-Table:

THE QUESTION of smoking in the mill I would solve as follows:

I would provide a smoking room for the help. If the mill is run on a piece-rate basis, I am sure the workers would not take unfair advantage, for I would require them to stop their machines while in the smoking room. Such operations

the Rates of Pay?

of rates is that he is far enough removed from the problem to have an absolutely unprejudiced opinion. In fact, I do not believe that it is correct to have the overseer have anything to say about wages except in a purely advisory capacity. It should be determined how much a certain job should be paid and this figure used as a standard.

"The super would be the one to set the standard on a fair basis, after consulting with the management to see that it conforms to company policy. I think that a mill has much to gain by having the help know that every job pays what it is worth, and this advantage would be lost if the overseer were allowed to change the rate according to the individual hired."

◆

Where there is some leeway in rates of pay do *you* think the overseer, the super, or the management should make the decision?

Overseers and others are invited to discuss this and other questions brought up in the super's talks. Letters accepted and published will be paid for without regard to length. Brevity is desirable.

as were not on piece rate I would put under an honor system, as I have done when I put a shower in. I found it worked successfully after a brief talk to the help, explaining to them that if I found more than one man at a time in the shower room I would take the shower out.

We employ 60 men in the mill, and we have a temperature of approximately 90° day and night, as our machines are run with steam. In the last three months that the shower has been up I have failed to find more than one man at a time in there. I am sure that it would work out the same way with the smoking room. J. MANER,
Princeton Rayons, Inc.

Problem of Who Should Hire the Help

Editor, Overseers' Round-Table:

I AGREE with Bill this time and say the overseer should hire his own help. If the super or anyone else does the hiring the question is who is responsible for the work done and who is going to do the firing for incompetence, which at times becomes necessary in every plant. Where is the authority and responsibility of the overseer if he can't hire and fire those for whose every action he is held responsible?

I have been an overseer in many mills during the last 25 years and in only one did the super want to do the hiring. What a terrible mess that place was; organization was unknown, for the overseer was held responsible for the incompetents without power to apply a remedy. Things are different at that mill now, for the super and all his "help" are out. Production and quality are better and everyone is happy.

I consider an employment officer and staff a waste of money. Hiring the help is the duty of the man for whom they will work. I can't see an overseer being too busy to interview new hands when wanted, for in a properly organized plant it is a rare occurrence and not a daily affair.
"OVERSEER."

Editor, Overseers' Round-Table:

THE QUESTION of help is an important problem; it is expensive to train them, costly if they do not stay on the job, and the general morale is more or less affected if they are not properly "hired."

In order to obtain the best help available, the company should maintain its own employment officer who should interview each prospect, investigate as much as necessary, and classify in the proper group. When the overseer needs additional help let him go to the employment officer and have them go over the list together and select the most likely applicant. When the prospect is called in the overseer conducts the interview and if not satisfactory another is called in.

By the above plan the following results are obtained:

1. The company has a chance to look over all bets and create a feeling of giving a fair chance.
2. The overseer wastes no time on dead timber, but the final selection is left to him.
3. Both the company and the overseer have used their best judgment, which should mean a high average, for two heads are better than one. W. G. LAIRD.

Editor, Overseers' Round-Table:

BY ALL means an overseer should be allowed to hire his own help, for he knows what his needs are. The time he spends talking with an applicant is time well spent for he can ask the questions he would like, find out just what the applicant can do and determine if he, or she, will fill the bill.

I think the superintendent should hire the overseer and the overseers hire the help. As for an employment agent, that is an unnecessary expense. C. W. C.

◆

Summary of Discussion on Hiring the Help

The verdict on the question of who should hire the help, according to the majority opinion, goes to the overseer. The only support which the employment agent received was in the case where he was thoroughly experienced in all mill operations and worked very closely with the overseers. A plan which met with support was to have an employment officer whose duty it was to interview all applicants, separate the wheat from the chaff, and then have the overseer interview only the likely prospects. This method was said to save the overseer time, but still leave the final decision in his hands.

NEWS about MEN

THOMAS M. MARCHANT, president of the South Carolina Cotton Manufacturers Association, has named the following as a cooperative committee to act for the association: B. E. GEER, W. E. BEATTIE, R. E. HENRY, Greenville; W. C. HAMRICK, Gaffney; VICTOR M. MONTGOMERY, Spartanburg; EMSLIE NICHOLSON, Union; JOHN A. LAW, Spartanburg, and GEORGE A. SLOAN, president of The Cotton-Textile Institute.

JOHN T. THORNE, prominent business man, banker and cotton grower, of Farmville, N. C., was elected president of the North Carolina Cotton Growers Cooperative Association, and U. BENTON BLAYLOCK, secretary and general manager, was also elected vice-president and general manager of the association, at the recent meeting of the directors in the offices of the organization at Raleigh.

JOHN SANFORD, head of the Bigelow-Sanford Carpet Co., Amsterdam, N. Y., has returned from an extended sojourn in Europe.

V. A. MAUDR, prominent cotton man of Czechoslovakia, has recently taken joint office space with E. G. Carter & Co., at Houston, Tex., and is buying cotton in that section for a group of Czechoslovakian cotton mills.

WILLIAM C. VEREEN, president of the Moultrie (Ga.) Cotton Mills, and also head of the Colquitt County Warehousing Co., owners of several large sales tobacco warehouses in Moultrie, had charge of the dedication exercises last week, of the new tobacco sales warehouse at Moultrie.

FERDINAND THUN, of the Wyomissing (Pa.) Industries, Inc., and MRS. THUN are having plans prepared for a library building 74x131 ft., capacity 17,000 books, which will be a gift to the borough.

L. N. LITTAUER, president of the Gloversville (N. Y.) Knitting Co., has donated $25,000 to the Fonda Board of Education for construction of a new recreational building.

JAMES L. TRUSLOW, a member of the executive force of the Whitin Machine Works, Whitinsville, Mass., and MRS. TRUSLOW, who were married on July 30, sailed from New York on Aug. 1, for a six weeks' trip abroad, during which time they will visit Spain.

W. L. HAYWARD, president of the Hayward Woolen Co., East Douglas, Mass., was marshal of the parade held in connection with the public reception tendered to WINFIELD ALDRICH SCHUSTER, son of WALTER E. SCHUSTER, treasurer of the Schuster Woolen Co., and the Hayward Woolen Co., both of East Douglas, and MRS. SCHUSTER at East Douglas Town Hall on Aug. 2, on their return from a wedding trip. They were married in Harmony, Me., on July 26.

DAVID N. TAFT, president and treasurer of David N. Taft, Inc., Oxford, Mass., and family, are passing the summer at North Falmouth, Mass.

JAMES BORDEN, an official of the Felters Co., Millbury, Mass., and MILDRED SMITH, also of that town, are to be married.

W. B. LAUGHLIN, president of the Laughlin Mfg. Co., Cohoes, N. Y., is passing his vacation at Lake George.

JOHN E. CROTTY, formerly vice-president of the Walnott Knitting Co., Utica, N. Y., but for the last year an official of the Du Pont Rayon Co., Buffalo, N. Y., has resigned to become identified with a new enterprise at Utica.

•

CLARE H. DRAPER, vice-president of the Draper Corp., Hopedale, Mass., and family, will pass the month of August at their summer cottage at Hyannisport, Mass.

HOLBROOK B. ELLIS, son of GEORGE W. ELLIS, vice-president and assistant treasurer of the A. D. Ellis Mills, Inc., Monson, Mass., is confined in the Clinton, Mass., hospital as a result of injuries sustained in a motorcycle accident on Aug. 2.

KATHLEEN GOLDSMITH, director of sales promotion for Cheney Bros., New York, has resigned, effective at once. Miss Goldsmith was appointed sales promotion head last December, succeeding PAUL THOMAS.

Davies

E. C. Klindworth, manager Jantzen Knitting Mills plant in Sydney, Australia, who has returned to visit the home office in Portland, Ore., after an absence of two years.

ANTONIO SAID, son of the senior member of the textile firm of Said & Yarrur, La Paz, Bolivia, S. A., who is employed for the summer by the Draper Corp., Hopedale, Mass., will be a member of the senior class of the New Bedford (Mass.) Textile School next fall. He is planning to return to Bolivia next year.

R. E. SMITH, JR., recently graduated from the Textile School of N. C. State College, is now with the West Point Mfg. Co., at Fairfax, Ala., manufacturer of crash and towels.

H. W. HACK, of the New York office of the Joanna Cotton Mills, Goldville, S. C., has been on a visit to the mills.

CHARLES A. ROOT, JR., son of CHARLES A. ROOT, treasurer of the Uxbridge (Mass.) Worsted Co., Inc., and associated with the business, and MRS. ROOT, have returned from a several weeks' wedding trip in Europe.

WILEY H. MARBLE, an engineer for the Curtis & Marble Machine Co., Worcester, Mass., is taking a course in training at the army engineer school at Camp A. A. Humphries, Va., from Aug. 3 to Aug. 17. He is a captain in the 413th engineer reserve officers battalion.

F. V. W. BLOOD, secretary of the Blood Knitting Co., Amsterdam, N. Y., has returned from a month's vacation along the Maine coast.

J. L. DAVIS, for eight years auditor and assistant secretary and treasurer of the Durham (N. C.) Hosiery Mills, Inc., has resigned to accept a position in the office of Liggett & Myers Tobacco Co., in New York, for which concern he worked before coming to the hosiery mill. ERNEST M. HUNTER has been named as auditor and assistant treasurer of the company, and W. J. O'CONNOR becomes assistant secretary.

HARRY C. COLEY, secretary and treasurer of the Howard Bros. Mfg. Co., Worcester, Mass., and family, have returned from Chatham, Mass., where they passed the month of July and will spend the remainder of the summer in camp at Northboro, Mass.

SPENCER A. REED, former treasurer and general manager of the Athol (Mass.) Mfg. Co., and family, have returned from a month's vacation at Scituate, Mass.

ARTHUR D. WINDLE, treasurer of the A. D. Windle Co., Millbury, Mass., has been selected as the Republican candidate for the nomination for State representative from the Sixth Worcester (Mass.) district.

J. A. GROVES, treasurer of Wiscassett Mills Co., Albemarle, N. C., has been nominated for the Legislature by the Democrats of Stanly County.

FRANK SWAN has been elected a treasurer and a director of Providence (R. I.) Dyeing, Bleaching & Calendering Co., succeeding CHARLES H. MANCHESTER.

WILLIAM F. LAKE, formerly superintendent of Adams (Mass.) Woolen Mfg. Co., has been elected treasurer of the newly formed Adams (Mass.) Textile Mfg. Co., of which HARRY A. SIONSKY, formerly treasurer of Adams Woolen Mfg. Co., is to be the president.

ERNEST REMLEY has been appointed general manager, A. L. BOWEN, superintendent, E. L. SWORD, overseer of carding, and BEN PONQUEST, master mechanic of the Certified Laboratory, Inc., Marble Falls, Tex., which will begin operations producing absorbent cotton within the next few weeks.

W. G. SHAEFER, formerly southern district manager of the McCallum Hosiery Co., has been made sales manager for the Dondown Hosiery Mills, of Griffin, Ga., with headquarters in the Rhodes-Haverty Building at Atlanta, Ga.

HERBERT W. WILKINSON, general manager for the Southbridge (Mass.) Finishing Co., and the Sturbridge (Mass.) Finishing Co., was chairman of the general committee in charge of the annual outing of the Rotary club of Southbridge for the children of that town on July 29.

CHARLES M. ROBINSON, who retired as agent for the Wauregan (Conn.) Co., on Aug. 1, after 12 years of service, plans to spend the remainder of the summer near Quonset Point, R. I.

MARSHALL P. ORR, superintendent and other employes of the Orr Cotton Mills, Anderson, S. C., are building a modern golf course in the meadow near the plant, which will soon be ready for service.

GEORGE B. BYRD, who recently resigned as superintendent of the Caraleigh Cotton Mills, Raleigh, N. C., is now superintendent of the Pee Dee Cotton Mills, Rockingham, N. C.

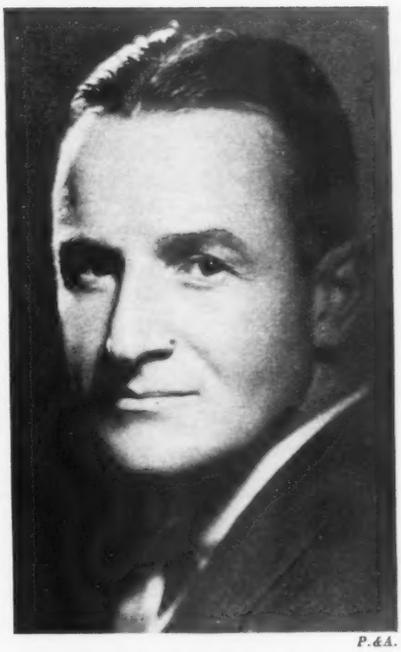
E. L. DAUGHTRIDGE is now superintendent of the A. Schottland, Inc., Rocky Mount, N. C., succeeding A. HOTZ.

FRANK ERNST, plant superintendent of the Du Pont Rayon Corp., Old Hickory, Tenn., has been promoted to assistant plant manager. CHARLES SWITZER, assistant plant superintendent, has been promoted to plant superintendent.

WILLIAM H. HODGSON has resigned his position as superintendent of the Warren Woolen Co., Stafford Springs, Conn., having been in the service of the company for the last five and a half years.

FLOYD WATSON has been chosen superintendent of the Griffin (Ga.) Cotton Mills.

BARRON BAUM, of Charlotte, N. C., superintendent of the finishing department of the Larkwood Silk Hosiery Mills, is recuperating at his home in Charlotte, from an automobile accident in which he was injured several weeks ago.



P. & A.

John A. Spooner recently appointed merchandising manager of the Viscose Co., with duties including supervision of sales promotion, advertising and publicity.

J. H. CLARK, head of the spinning department of the Borden Mfg. Co., Goldsboro, N. C., has resigned.

RALPH CARTER, boss carder at the plant of the Ballston (N. Y.) Knitting Co., is recovering from injuries received recently while on duty at the plant.

G. F. DUFFIE, overseer of weaving at the Buck Creek Cotton Mills, Siluria, Ala., has resigned.

W. T. MORTON, who has been boss spinner at the Aragon-Baldwin Cotton Mills, Inc., Rock Hill, S. C., has been transferred to a similar position with the Whitmire (S. C.) plant of the same group of mills, succeeding J. A. NORRIS, resigned.

●

W. S. JONES, master mechanic for the Marion (N. C.) Mfg. Co., has resumed his work in the mill after having been ill for some time.

J. A. OGLETREE, overseer of spinning, spooling and warping at the Enterprise (Ala.) Cotton Mills, has resigned.

ALBERT POWERS is now overseer of the cloth room of the Laurens (S. C.) Mills.

ALFRED O. PREUSS, former overseer of the dressing department at the Rochdale (Mass.) Mills of the American Woolen Co., is moving his family to Bennington, Vt., where he has accepted a similar position with the Holden-Leonard Co.

JAMES A. TAYLOR has resigned his position as boss finisher at plant of Bedford Johnson Co., Bedford, Va., and is now employed by the Washougal (Wash.) Woolen Mills.

Obituary

Philip F. Lindsay

Philip F. Lindsay, for the last 12 years in charge of the Textile Department of the Farview State Hospital (formerly State Hospital for the Criminal Insane) at Waymart, Pa., died late last month at his home in Philadelphia where he was born. He was one of the pioneers in the manufacture of fine cotton and silk goods in the South over 30 years ago. In 1904, finding that the climate did not agree with him, he returned to Philadelphia and took over the management of J. G. Carruth Mfg. Co. When the United States entered the World War Mr. Lindsay entered military service as a textile inspector, and remained in that service until the close of the war. Mr. Lindsay later organized the textile department at the Farview State Hospital and operated it with labor of the inmates. This plant was installed primarily for its curative value as occupational therapy, and Mr. Lindsay's duties consisted principally in the instruction of patients in the different phases of the industry. His success in this line is attested by the fact that many of the patients whom he instructed have been discharged from the institution and are now usefully employed as textile workers. The plant manufactured all the textiles used by the hospital. Mr. Lindsay was a member of the Knights of Columbus. He is survived by his widow and one son.

James H. Sanders

James H. Sanders, for 20 years superintendent and general manager of the Southbridge (Mass.) Printing Co., now the Southbridge Finishing Co., with which he was connected for 56 years, died at the home of his daughter in Boston, on Aug. 2, after a long illness. He was born in Crompton, R. I., on Dec. 29, 1851 and went to Southbridge in 1870. Four years later he became connected with the printing company and remained with it and its successor until a short time ago. He was a charter member of the Manufacturers' and Merchants Association, Southbridge and affiliated with other organizations in the town. He leaves two daughters. Funeral and burial was in Southbridge.

Frank Senior, Sr.

Frank Senior, Sr., former president of the Rex Knitting Co., Little Falls, N. Y., died at his home in that city on Aug. 3 after an illness of several weeks. He was born in Little Falls 68 years ago. His first position was with the Titus Sheard Co., where he served as treasurer until Mr. Sheard's death in 1904. In 1905 the firm was incorporated under the firm name of the Rex Knitting Co. and Mr. Senior was made president, a position he held until 1927. Frank Senior, Jr., is treasurer of the company. Mr. Senior was prominent in Masonic circles.

W. W. Patrick

W. W. Patrick, a director of the Foxboro (Mass.) Co., died last month of pneumonia. He was a widely known figure in the instrument business. He had been associated with the founders of the Foxboro Co. since 1899. In 1908, he became New York district sales manager and held that post for 22 years. Mr. Patrick was also prominent in the Association of Scientific Apparatus Makers of America.

NEWS about MILLS

Cotton

Exposition Cotton Mills, Atlanta, Ga., plan improvements to several of the buildings of the mill, it is reported. Robert & Co., textile engineers of Atlanta, Ga., are drawing the plans. The improvements will cost $65,000.

Margaret Mill, Huntsville, Ala., hosiery yarns, which has been closed down since July 1, will probably not open again until fall, according to announcement made by the management to its operatives. Lack of orders for products of the mill is given as the cause.

Muscogee Mfg. Co., Columbus, Ga., is running on a four-day week schedule and will hold to that basis for an indefinite period.

Pacific Mills, Lawrence, Mass., have made a further reduction in production in its Cocheco department, adopting a three-day week schedule instead of four days, as has prevailed for a few weeks past.

***Lancaster Mills,** Clinton, Mass., in liquidation, realized $82,575.65 from the public auction of the remainder of the machinery and equipment not previously disposed of, which was held on July 29 and 30. The sale attracted large numbers of mill men from various parts of the country, as well as dealers in used machinery and junk men. The offerings were divided into 2,048 lots located in the different buildings at the plant, including the Lancaster Mills Inn and the dispensary. While prices received for most of the machinery was, except in special cases, the "junk" value of the machines, the liquidating agents stated the total received from the sale was more than they had anticipated. Buyers have been given until Aug. 13 to remove their purchases from the premises. Samuel T. Freeman & Co., Boston and Philadelphia, had charge of the sale. The mill corporation has made application to the town for a material reduction in the taxable value of its property, both real and personal, as a non-operating company.

Walcott & Campbell Spinning Co., Gulfport, Miss., is having the Southeastern Machine Co., Atlanta, Ga., install the machinery in its plant.

Clinchfield Mfg. Co., Marion, N. C., print cloths, resumed operations on full production schedule, including day and night working forces on Aug. 4, and expect to continue on that basis for some time to come. The day workers will work 55 hours a week, and the night employes 50 hours.

Cross Cotton Mills Co., Marion, N. C., is making a number of improvements, including repainting and reconditioning of houses and installation of the Firth system of vacuum cleaners.

Clinchfield Mfg. Co., Marion, N. C., on Aug. 4, went on a full-time schedule, running 50 hours a week at night and 55 hours a week in daytime. Resumption of a full-time schedule also brought the announcement that there would be a 10% reduction in wages.

Aragon-Baldwin Cotton Mills, Inc., Whitmire, S. C., are said to have concluded negotiations for the sale of their local electric distributing system to the Southern Public Utilities Co., Charlotte, N. C., which will take over and operate as a part of its system. The plant is now operating 52½ hours per week, day time, with no night work.

Union-Buffalo Mills Co., (Union S. C.) has purchased oil-spraying equipment from Borne Scrymser Co., New York City. This makes their third installation.

*Indicates previous mention of project.

Wool

Kezar Falls (Me.) Woolen Co. is running on a full capacity schedule in all departments, and expects to hold to this operation for some weeks to come.

Bedford (Mass.) Textile Co., has been formed with a capital of $25,000, to operate a mill for the manufacture of wool waste, etc. The company is represented by I. Morris Freedman, 6 Woodford St., Worcester, Mass., treasurer. Ralph A. McCard is president.

Talbot Mills, North Billerica, Mass., are building a wet finishing mill of reinforced concrete and brick 60x220 ft., one-story high. H. Wales Lines Co., Meriden, has the general contract. The reinforcing steel contract was awarded to the Concrete Steel Co., Boston. Charles T. Main, Inc., is engineer.

***Jefferson (Mass.) Mfg. Co.** has again returned to full-time operations.

Hamilton Woolen Co., Southbridge, Mass., is operating on a full-time schedule with a full working force.

Ohio Carpet Co., West Warren, Mass., which has been shut down for a month, is recalling its employes and operations are expected to be back to normalcy within the next two weeks.

Thorndike Co., West Warren, Mass., is gradually increasing the working force in its woolen division, which has been on full-time schedule for the last two weeks.

Elm Mills, Inc., Tilton, N. H., which have been operating only part time this summer, manufacturing woolen dress goods and cloakings, will resume operations shortly.

Mohawk Carpet Mills, Amsterdam, N. Y., closed bids on Aug. 4 for an addition to building No. 32. Charles W. Becker, Amsterdam, is engineer.

John F. Norman Co., Inc., 400 Madison Ave., New York, has plans under way for a one-story carpet mill at Linden, N. J., where tract of land has been secured. It will be 142 x 229 ft., reported to cost about $100,000, with equipment. It is understood that bids will be asked at once. Warren & Wetmore, 16 East 44th St., New York, are architects.

***Cambridge Mills, Inc.,** Philadelphia, Pa., have been chartered under State laws with a capital of $50,000, to take over and operate the **Cambridge Worsted Mills,** with local mill at Atlantic & Ruth Sts. John N. Cooper, heretofore secretary of the company, will be treasurer. Other incorporators are C. Clarence and Harry Manuel, both previously identified with the former company.

John Wilde & Bro., Manayunk, Philadelphia, Pa., woolen carpet yarns, have superstructure in progress on a new three-story, brick and concrete, mill addition, 54x160 ft., estimated to cost approximately $55,000. As soon as the structure is ready for occupancy, the company will move machinery at leased quarters, and will provide additional equipment for expansion.

Athens (Tenn.) Woolen Mills, of the American Textile Woolen Co., of Sweetwater, Tenn., are running full force, with two shifts part of the time.

Knit

Perkins Hosiery Mills (No. 3), Columbus, Ga., manufacturers of colored yarns, mock twist, men's and women's hosiery, are operating on a three-days-a-week schedule.

Chester (Ill.) Knitting Mills, are reported planning an addition to mill, designed to approximately double the present capacity. It is said that an architect will be selected to prepare plans at an early date.

Real Silk Hosiery Mills, Indianapolis, Ind., are holding to a maximum production basis with day and night forces, and expect to continue on that schedule for an indefinite period.

Bradbury Knitting Co. Inc., Boston, Mass., recently organized with capital of $10,000, to operate a knitting mill, will be represented by Frank R. Nolan, 176 Trapelo Rd., Belmont, Mass., who has been elected treasurer. Herman Tobias will be president.

A. V. Morris & Sons, Amsterdam, N. Y., have completed the work of razing two of the abandoned mill buildings on Chuctanunda St. which were formerly used for manufacturing purposes.

Liddle & Michael, Amsterdam, N. Y., manufacturers of women's silk hose and men's half hose, now undergoing liquidation, have received a number of inquiries regarding the disposal of their mill property on Cedar St.

Bennett Textile Co., Cohoes, N. Y., resumed full-time operations Aug. 4, following the annual two weeks' vacation period.

Velvet Knit Corp., Syracuse, N. Y., has filed notice of increase in capital from a nominal amount of 300 shares to $100,000 and 3,000 shares of common stock, no par value.

Golden Belt Mfg. Co., Durham, N. C., is running on a basis of four days and four nights a week, and expects to hold to that schedule for some time to come.

Durham (N. C.) Hosiery Mills, are holding to a full daytime production schedule, and have eliminated night working force until further notice.

Marion (N. C.) Knitting Mills, Inc., are adding one-third more floor space which will later be utilized by the installment of additional machinery. The plant is now running day and night.

Charlotte (N. C.) Knitting Co. and the **Rock Hill (S. C.) Hosiery Co.**, will hereafter be operated under one management, according to announcement of C. L. Okey, manager of the Rock Hill mill, who will remain in charge in Rock Hill, while W. W. Scott, office manager, will be transferred to Charlotte.

Kraemer Hosiery Co. is continuing the shutdown of its branch mill at Nazareth, Pa., caused a number of weeks ago by a strike of operatives, and there is said to be no intention to reopen the plant for some time.

Silk

Portland (Conn.) Silk Co. has arranged for a one-story addition 25x122 ft. to its plant on Pease & Stack Sts.

Cheney Bros., South Manchester, Conn., are arranging plans to establish a permanent local salesroom in Cheney Hall to be opened in the fall.

Heweso Silk Co., Shamokin, Pa. On application of a creditor, the Federal Court is considering the appointment of a receiver for this company.

Independent Silks Ltd., Montreal (Que.) Can., has completed all the details in connection with its purchase by the **Belding Corticelli Co.**, which will continue operations under the name of Independent Silks Ltd.

Rayon

***B. D. E. Rayon Mfg. Co.**, Boston, Mass., care of Jerome A. Petitti, 18 Tremont St., Boston, representative, is reported negotiating for the purchase of land at Lowell, Mass., as a site for proposed new mill, reported to cost over $500,000, with equipment. The Chamber of Commerce, Lowell, is active in securing a desirable location.

***Skenandoa Rayon Co.**, Utica, N. Y., in its expansion policy has taken on 500 new workers since Jan. 1, according to a survey just completed by the Chamber of Commerce in that city.

Finishing

Dillon Dye Works, Inc., capital $50,000, has received a charter to do business in Lowell, Mass., dyeing, finishing, bleaching and finishing cotton, wool, silk and other fabrics in warps, skein yarn and piece goods.

Sturbridge (Mass.) Finishing Co., has curtailed operation to the first three days of the week, after having a rushed period.

Colt Dye Works, Inc., Paterson, N. J. The Court of Chancery has been asked to appoint a receiver for this company, which is alleged to be in process of dissolution.

Cluett, Peabody & Co., Waterford, N. Y., finishers of cotton goods, resumed full-time operations July 29, following a two weeks' shutdown.

Kerr Bleaching & Finishing Works, Inc., Concord, N. C., sustained a fire loss at its mill on July 27; an official estimate of damage has not been announced. The loss will be replaced.

Manley Mattress Co., Joliet, Ill., plans rebuilding of portion of local mill at 115 South Bluff St., recently damaged by fire with loss reported in excess of $18,000.

Oregon Linen Mills, Inc., Salem, Ore., closed temporarily on July 19, affecting 35 employes.

Perfection Twine Co., Camas, Wash., capital $25,000, filed papers of incorporation July 17. J. W. Duvall, N. W. Duvall and Ruby Duvall are the incorporators.

Universal Silk Dyers, Ltd., have located in Lindsay (Ont.), Can. The company is capitalized at $350,000, and is authorized to carry on the business of dyers and finishers of all kinds of textiles, including weighting of real silk and rayons. The officers are: President, Ellsworth Flavelle, formerly director of the Robert Simpson Co., Toronto; vice-president, Dr. F. Zeidler, president and general manager of Dickenson Dyeworks, Toronto; secretary-treasurer, A. P. Beal, Lindsay; directors, David C. Dick, Cobourg, Ontario; T. H. Stinson, K. C., Lindsay; and Dr. Gordon Hyland, Toronto.

Miscellaneous

Moorhead (Minn.) Mattress Co. is planning the rebuilding of portion of its mill recently destroyed by fire. An official estimate of loss has not been announced.

Cable Flax Mills, Schaghticoke, N. Y., has completed dismantling of its property with indications that the plant will be disposed of at an early date.

Crescent Textile Supply Co., Philadelphia, Pa., braiding, weaving and knitting all varieties of trimming, has placed contract for the erection of a two-story addition to its plant.

Western Bedding Co., Philadelphia, Pa., is being organized by local interests, represented by Samuel G. Schwartz, North American Bldg., Philadelphia, an attorney, to operate a local mill.

Philadelphia, Pa. Harry Karff has leased property at Beach & Brown Sts., and will operate a mill for the production of cotton and wool waste at that location.

National Bedding Co., Ottawo (Ont.), Can., is said to be planning the early rebuilding of portion of plant recently destroyed by fire with loss of about $17,000.

Carolina Mattress Mfg. Co., Spartanburg, S. C., recently organized, is installing equipment in a local mill, and plans early operations. The new company is headed by Arthur H. Hatcher and Claude Echols, both of Sanford, Fla.

◆

Useful Catalogs

First Aid in Industry. Metropolitan Life Insurance Co., New York City. First booklet of "Industrial Health Series." Describes construction and operation of first aid room in small plants; also summary of state laws concerning first aid requirements.

Top Rolls. Gill Leather Co., Salem, Mass. Advantages of leather for top rolls explained in folder which also contains leather samples.

Lighting. General Electric Vapor Lamp Co., Hoboken, N. J. Folder compares cost of daylight with Cooper-Hewitt "better than daylight" mercury-vapor lighting.

Trucks. American Pulley Co., Philadelphia. Complete catalog, with prices and specifications, of "American" hand trucks of pressed steel; preface describes characteristics and advantages of trucks.

Motors. The Leland Electric Co., Dayton, Ohio. List of motor equipment carried by this company.

Paints. Thompson and Co., Pittsburgh, Pa. Analysis of value of daylight effect in painting.

Ball-Bearing Motors. Reliance Electric & Engineering Co., Cleveland, Ohio. Folder of questions-and-answers about Reliance across-the-line motors, with ball bearings for two- and three-phase a.c. circuits.

Concrete Materials. Johns-Manville, New York. Folder illustrated with halftone photographs, describing use and service of Celite as a concrete ingredient.

Cotton-Pickers. American Cotton-picker Corp., New York. Illustrated folder, showing operation of cottonpicker in the field; with testimonials.

Textile Machinery. A. W. Buhlmann, textile engineer, New York. Application of Buhlmann skein-dyeing machine to production of rayon, silk, cotton, schappe, chenille, ribbons, hat bands, and threads.

Portable Mixers. Mixing Equipment Co., New York. Folder citing industries that use Lightnin portable mixers, and describing new models; also folder stressing efficiency of this equipment.

Pumps. Goulds Pumps, Inc., Seneca Falls, N. Y. Analysis of installation and operation of industrial centrifugal pumps, compiled by F. G. Switzer, professor of hydraulic engineering, Cornell University.

Questions and Answers

We undertake to answer, free of charge, to the best of our ability, questions pertaining to textile matters received from any regular subscriber to TEXTILE WORLD. We do not undertake, however, routine analysis of yarn or fabric, or investigation involving unusual expense.

Inquiries should give the fullest information and data possible. In the case of damage to material, a sample should be sent. All inquiries must be accompanied by the name of the person inquiring, not for publication, but as evidence of good faith. The identity of those seeking information on technical subjects will not be disclosed.

Letters expressing opinions or voicing criticism are cordially invited. These will be signed by the correspondent's name unless the letter itself contains a request that the name be withheld.—EDITOR.

Avoiding Impression Marks and Waves in Silk Weaving

Technical Editor:

Please answer the following questions: What causes impression marks and how may they be eliminated? Why does the mark appear when the filling is missing, even after ripping down an inch below where the filling ran out? What is the cause of waves after ripping? *(7251)*

Impression marks are caused mostly by broken picks. You will notice this defect more on small pick counts than on heavy pick counts; likewise the defect will appear on the heavier threads more readily than on the light threads. A four-thread of 60 picks will show this mark more plainly than a four-thread of 72 picks. There are other things likely to cause shires, which after being ripped out will leave a mark identical with the impression mark and so called. These causes are the result of faulty fixing and can be overcome. However, the marks caused by broken picks are a very annoying source of trouble and must be traced in order to be eliminated.

As the thread is broken, on the turn pick of the shuttle or pick of different twist, the two threads are together in the shed. This defect is ripped out; and after the fabric is woven back to the defect, one pick will fall in the crease where two have been, leaving this impression mark. Due to the heavy crease placed in the warp threads by the two picks lying together, the defect is plainly evident.

In overcoming the defect, it is advisable to have the center stop motion looked over so it will stop the loom on the loose pick. The feeler wires too loose and again too taut will allow the lay to beat over on the next pick. Again the shuttle rings, if cut, will sometimes cause the filling to snap back so the feeler wires will not function, as will also the shuttle pegs, if cut. Filling should move freely and still have sufficient tension to hold.

If the loom fails to stop before the reed touches the woven cloth, the brake should be taken up, even if it necessitates the placing of new brake lining on the loom. Generally some slight adjustment of the brake will overcome any needed repairs. There are six different adjustments on some looms on the brake alone and we wonder if many fixers realize this and just what adjustments will cause a certain effect.

After ripping out and starting up, the filling that is now weaving is forced into the cracks or impressions left from the old picks. On some looms the weave will be wavy in appearance, skipping from one to three picks, about a fraction of an inch in length to 4 or 5 in. in length scattered the width of the cloth. The reason may be due to the sandpaper being tacked on instead of glued on the sand roll, and it can also be due to the harness not being in position after weaving is started. The latter is generally the fault. The harness should be in exactly the same position as before ripping. This can be accomplished by letting the weights down after setting the loom; the harness will spring back, after which the loom is reset.

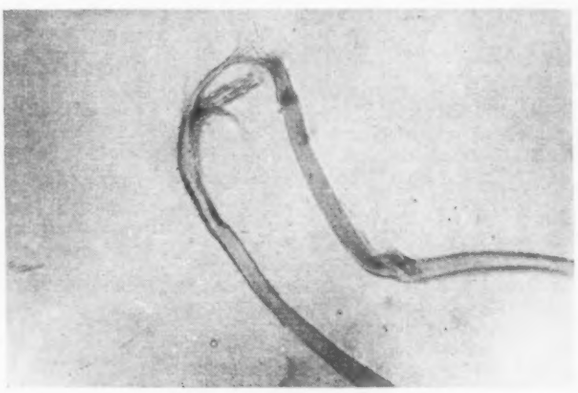


Fig. 1. Long fiber, showing mechanical damage

Dampen one shed lightly with a damp rag for wavy appearance, being sure not to touch the cloth with the rag. The wavy effect will not appear after the loom is started.

◆

Virgin Wool or Shoddy?

Technical Editor:

Will you please advise us whether the enclosed samples are composed of all virgin wool? How can such a fact be determined? *(7260)*

It is very difficult to determine definitely whether or not wool fabrics contain reworked fiber. The best that we can do is to examine the samples under the microscope and see how much of the fiber, if any, shows mechanical damage typical of reworked material.

As would be expected in a napped material of this sort, we find by this means many short fibers present in your samples. If these are separated from the long fibers, they show, as might be expected, considerable mechanical damage. Whether this was the result of reworking as in the preparation of shoddy, or whether it is the normal result of the finishing operations necessary for the manufacturing of the final fabric, is almost impossible to determine from a sample of finished fabric alone.

The long fibers show different degrees of mechanical damage of the sort appearing in Fig. 1, varying with the sample. In samples *A* and *B*, both warp and filling show broken fibers. In *C*, the filling is in good condition and

the warp is fair. The warp condition of *D* is good and the filling condition is fair. In every case there would seem to be a mixture of wool and other fibers—probably camel's hair. (See Fig. 2.)

Fig. 3 shows the normal appearance of long fibers.

The fibers of sample *D* seem to be in better shape on the whole, both in the long and short material, than the other samples. Sample *C* is probably next in order, and is followed by *B* and *A* consecutively.

As you will realize, it is not possible to say where the mechanical damage, which is evident in many cases, occurred. Its severity would lead us to suppose that a certain amount of the fiber is probably reworked.

◆

Effect of Higher Cut on Knit Goods

Technical Editor:

We are sending some samples of yarn and two of our garments, and would like to know what size this yarn is and whether the yarn used in the two garments is the same. Kindly let us know what difference we could expect in our sizes if we used a ten-cut machine instead of the eight-cut we are now using. (7101)

A sizing was made of four separate 120-yd. lengths, one from each bobbin. The lengths weighed 80.1, 77.5, 83.8, and 84.0 grains. The average weight per 120 yd. was 81.35 grains, which gives a count of 12.3s. We have made attempts to ravel yarns from the fabrics submitted and find that it is not practical. The napping is

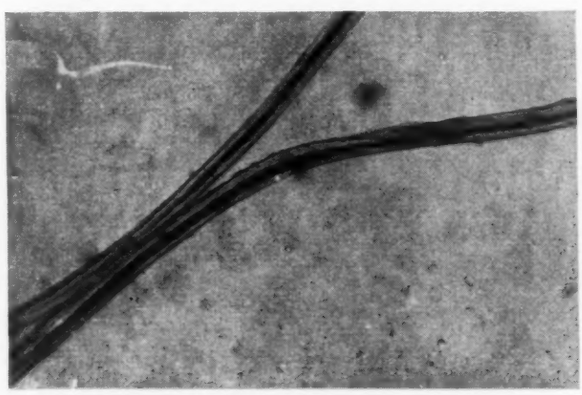


Fig. 2. Camel's Hair

sufficient to weaken the yarn so that it breaks too frequently and is stretched in other places beyond the normal length. In using a ten-cut machine with the same yarn and stitch, you will probably increase both the width and the weight. If you shorten the stitch, it may make a little difference, but probably the weight and width will still be somewhat greater.

◆

Finishing Lace

Technical Editor:

I am enclosing a sample of lace, one side of which has a high luster. Is the luster obtained in the finishing process or on the lace machine? If in finishing, I should appreciate your giving me a formula. (7253)

The sample of lace submitted is the product of the Levers lace machine. It was woven in the gray, and then piece dyed to the shade desired. The high luster noticeable in the finished lace is not obtained on the lace machine, but in the finishing process. This sheen is always on the face or nap of the lace and is put on after the dyeing process.

In order to obtain luster, the lace is run through a tentering machine fitted with a series of steam-heated rolls. The nap of the lace is pressed against the hot metal by means of a plain or cloth-covered wooden idler roll. Pressure against the hot metal is responsible for the sheen on the face. The back, being against the idler roll, does not receive any added luster and appears dull in contrast.

THOUSANDS of inquiries are handled annually by the Technical Editors. In order that as many readers as possible may benefit from this service, we select problems of general interest for publication each week.

◆

Cotton Tape Curves

Technical Editor:

Enclosed find specifications we are using for a tape, sample of which is also enclosed. We are unable to get this without the radius. We have tried various weights on the cord without obtaining the desired result. Could you suggest a remedy? (7261)

The specifications given show that the material is woven from four warps—a warp for the face and back of the lip; a warp for the face and back covering of the cord; a cord, or stuffer, warp; and a binder warp. Your specifications indicate that the cord consists of 20 ends of 30/3, but the yarn is two-ply and looks like 30s. The interlacing around the cord of the sample is far from perfect.

We know no reason why the radius or curve should not be eliminated. The trick is in the weighting of the different warps, and the weights must be juggled until the desired results are obtained. There are two suggestions concerning the structure that might help. The first is

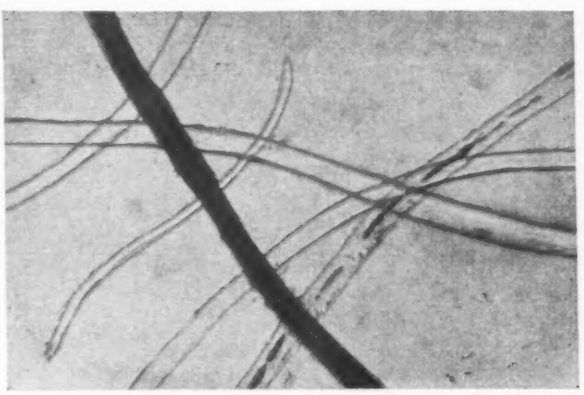


Fig. 3. Normal appearance of long fibers

that one half the binder ends be omitted and the size of the binder yarn be increased—for instance, eleven ends of 40/2 instead of 22 ends of 50/2. The second suggestion is that the two warps of 40/2, 44 ends and 16 ends, be combined. The cord warp should be quite heavily weighted. The binder warp should be only lightly weighted.

◆

White Spots on Nub Yarn

Technical Editor:

We are enclosing herewith a sample of nub yarn. We find that in dyeing this yarn with ordinary or direct colors in heavy shades, such as navy, green, etc., the dyestuff does not seem to penetrate properly, but leaves white spots. Any information you may be able to give us on this subject will be greatly appreciated. (7272)

The affinity of the fiber for the dye is so great that the outer portions of the yarn take up the dye and rob the bath before the harder portions have been able to absorb the liquor thoroughly. There are several remedies for this state of affairs: The dyestuff may be replaced with one of more solubility and slower dyeing properties. The amount of common salt or glauber salt used can be cut down considerably and 2% of phosfate of soda added to the bath; this will increase the solubility of the dye and allow it to penetrate better. You may add to the dyebath a number of materials which favor penetration: pyridine, triethanolamine, diethylene glycol, soluble oil, pine oil, or one of the advertised products which are more or less efficient. The most favorable dyeing temperature will be about 160°F. It will also be well to see that the yarn is well cleaned before you attempt to dye it, since the presence of oils, sizings, and dressings will act as resists to the dyeing.

◆

Elastic Webbing Uneven

Technical Editor:

We are enclosing a piece of elastic webbing which we would like you to examine. We are not concerned with the difference in color between the face and the back, or the lighter shade of the edge, but with the variation on the face of the web. We do not get this continually, but about 10% of our webs have this difficulty. Personally we believe it is due to the condition of the yarn, but we would appreciate your further thoughts on this matter. (7273)

The defects on this sample are of a quite different character from those noted recently on similar material. In the former case the shadings followed the threads and showed that there was a distinct difference between the nature of adjacent threads, but in this case there are light clouds which run irregularly across the fabric. These light clouds have the same appearance as those called resist spots by dyers of cotton piece goods. They are due to the presence of lime soaps and salts on the surface of the goods and generally result from neglecting to sour well with hydrochloric acid after bleaching. In many cases these spots may be diminished by padding the goods with an emulsion of 2 oz. of monopole oil to a gallon of warm water and then drying before padding with the color. It is advisable, however, to see that the bleached material is well soured and antichlored before dyeing.

◆

Yarn for Women's Hosiery

Technical Editor:

What number of yarn do you recommend for women's hosiery having rayon plated on cotton. The hosiery is to be knitted on 240-needle machines, Scott & Williams, 3½ in. diameter. We are now running 60/1 cotton plated with 180-denier rayon; but to meet the demand for cheaper goods, we want also to have a cheaper class of work on our machines. (7274)

We suggest trying 50/1 cotton with 150-denier rayon.

◆

Rubberizing Pile Fabric

Technical Editor:

We are enclosing a sample of pile fabric with a rubberized back. Can you tell me what kind of a sizing has been used and whether ordinary padding or printing machines can be used to apply this sizing to the fabric? (7280)

The rubberizing of dyed textile fabrics is quite a difficult operation, involving careful chemical and mechanical adjustments. Rubber applications are of two main classes: cold vulcanizing and hot vulcanizing. The cold-vulcanizing masses are composed of raw rubber dissolved in benzol to which has been added sulfur chloride in a very exact proportion. The sulfur chloride completes the vulcanizing during the drying. The hot vulcanization process utilizes rubber solution plus a definite amount of finely powdered sulfur, and requires running through a hot flue to bring about the reaction. In both cases it is customary to dust the rubber surface with soapstone or talc to remove stickiness. Dyed fabrics for rubber coating must be free from any traces of copper, as this quickly causes a deterioration of the rubber coating; many classes of dyes do contain copper in themselves, and this point should be checked beforehand.

Applications of this sort are always applied on a machine known as a back-filler. It is used for applying fillers to the back of satins and other fabrics. The goods next go to drying cans and later to the tenter frames. It would not be possible to apply a solution of rubber to the goods by means of a mangle or a quetch, since there is too much risk of getting the solution on the face.

◆

Thread Curls in at Edge of Crepe-de-Chine

Technical Editor:

The writer would like to add a little information to that contained in Question and Answer No. 7245, which appeared in the July 26 issue of TEXTILE WORLD. This defect occurs quite frequently in the manufacture of crepe-de-chine, but often can be eliminated at once, simply by putting a small strip of fur on the outer edge of the lay on the box side. Often the defect is caused by having too much pick on the loom, and from improperly packed pickers, which allow too much backlash to the shuttles.

JOHN PICONE.

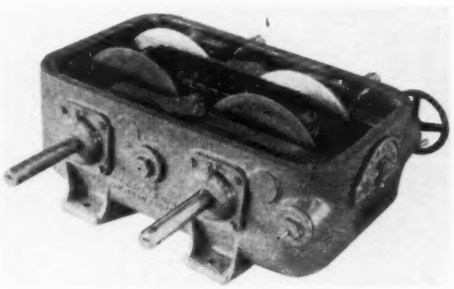
New Machinery & Processes

Worsted Card

AN IMPROVED worsted card has been announced recently by James Speed & Co., Inc., 179 Summer St., Boston, Mass. This machine, which is manufactured by John Hetherington & Sons, Ltd., Manchester, England, is adapted for various materials, such as crossbred and medium wool, camel's hair, and mohair. The card can be fitted either with balling head or coiler as desired, and can be made either for hand feeding or to work in conjunction with an automatic feeder.

One of the features of the machine is the manner in which the licker-in pedestals, bends for carrying burr rollers, and divider stands are mounted. These parts are permanently attached to a slipper which is bolted to the frame top. In this way, when any adjustment is required, the slipper bolts are loosened and the whole combination of licker-in, bends, burr rollers, and divider is moved together by an adjustable screw without disturbing the concentricity of the bend. Another feature of the licker-in is the mounting of the burr tins, which can be lifted off readily and at once replaced, adjusting themselves into proper working position. Burr rollers are made with steel blades, combining lightness and strength, and can run at high speed. Special grinding holders are provided for the lickers-in and dividers as well as for the cylinders and doffers.

Among the other improvements are included divider rollers fitted with self-aligning ball-bush bearings so that the dividers may be taken out without disturbing the setting or having to remove burr rollers or tins. The improved doffing motion consists of an eccentric running in an oil-tight box; the comb stock is made from steel tubing held in place by split forks with split clips, thus enabling setscrews to be dispensed with. A specially designed fancy box and cover provides means for facilitating setting of the fancy box in relation to the swift or cylinder, the fancy roller, and the worker roller. In addition, the framing has been redesigned with the cross pieces in the panels removed to give free access under the card for brushing out and cleaning.



Variable-speed transmission with cover removed to show mechanism

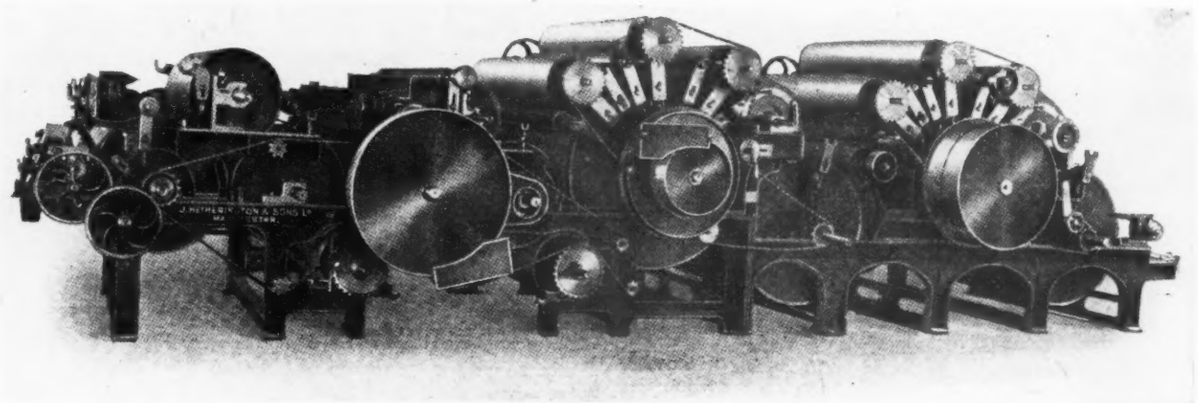
Variable-Speed Transmission

LEWELLEN MFG. CO., Columbus, Ind., announces a new series totally enclosed variable-speed transmission equipped throughout with ball bearings. While the interior mechanism of the new transmission is similar in principle of operation to the older types, this series is a departure from other drives in several respects. To insure protection against moisture and abrasion, the enclosure is water- and dustproof. Access to the interior is had by removing the cover. Pressure lubrication is provided throughout. Because of compact design, the space occupied is approximately one-half that of the usual types. It is stated that the new series not only eliminates accident hazard, but gives a large increase in power, together with reduced wear and tear on the mechanism.

This new series is available with drive-motor support, remote control, and other appliances. It may be supplied in regular speed ranges, and may be run in either direction, mounted in any position, and either shaft may function as the variable- or constant-speed shaft.

Static-Proof Belting

HAZARDS of operating belt drives where the generation of static charges was formerly a source of danger are said to be eliminated by means of static-proof belting developed recently by Charles A. Schieren Co., 30 Ferry Street, New York. Generation of static elec-



Improved worsted card

tricity on belt drives is caused by the natural creeping of the belt on the pulleys; and under favorable conditions, creep of less than ½% is sufficient to generate sizable charges. This is a source of danger, especially where manufacturing operations are carried on in the presence of dust or grease.

Generally, in damp weather, the belt drive does not generate large enough charges to cause sparks to jump. This is due to the fact that when the fibers of a leather belt are moist, the belt is a fairly good conductor and will lead the charges off the pulley about as fast as they are generated. On the other hand, dry atmospheric conditions are conducive to static troubles. A dry belt is a good insulator, and as the charge collects on the outer surface it continues to build up until it reaches the proportions of a spark and jumps to the nearest grounded object.

One of the means adopted for eliminating static charges has been to hang wire gauze over a belt, allowing it to drag on the slack strand, and then ground the wire gauze. This method has not been wholly satisfactory, because the collectors often have been neglected or have got out of order, and thus failed to ground belts properly. The Bureau of Chemistry, Department of Agriculture, recently did a great deal of work on this problem. It was found that by dressing a belt thoroughly with a mixture of lamp black, or carbon, and fish glue, it is possible to impart a surface that will conduct the charge from the belt to the pulleys; and then by grounding the equipment it is possible to lead off the charge as fast as it accumulates. While this method has a great deal of merit it is not entirely ideal, because it requires frequent dressing of the belt.

In the static-proof belt that has been developed by Charles A. Schieren Co., there is a row of copper-wire stitching along each edge which contacts with the pulleys at all times. In this way static charges, which normally collect on the outer surface of the belt, are led off through the belt by means of the wire stitching. It is then only necessary to see that the machines are well grounded to avoid any further danger from static charges. Belting made in this way is said to be permanently static-proof.

Crank-Type Shaper

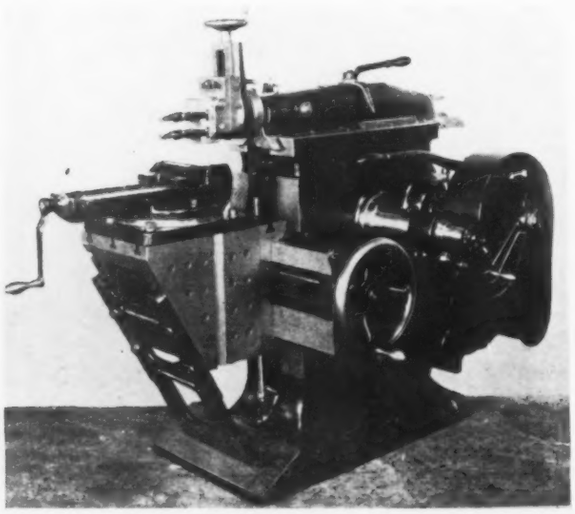
RADICAL changes in design are said to be embodied in a new crank-type shaper manufactured by the American Klopp Shaper Corp., 50 Church St., New York. In this machine the tool is carried on a reciprocating ram, the motion being transmitted through gearing which carries an adjustable crankpin. One of the outstanding characteristics of the shaper is the 30° table support, which replaces the ordinary perpendicular support. It is stated that this 30° support reduces vibration and gives added strength and rigidity. Other improvements include an adjustable ram with V-type bearing, simple gear-changing device, improved table with extended top, and box-ribbed column for preventing deflection under strains. A unique feature of the speed box is that only two gears are in mesh and only two spindles are in mesh at any one time, thus reducing vibration and wear to a minimum.

Heavy-Duty Contactors

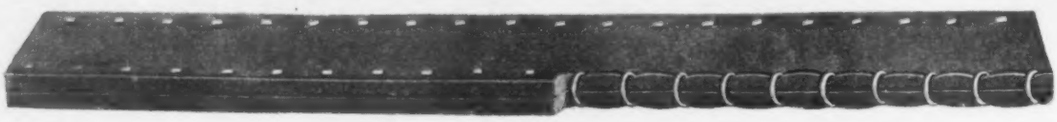
TWO new magnetic contactors, for heavy-duty a.-c. service, are announced by Cutler-Hammer, Inc., 207 Twelfth St., Milwaukee, Wis. They are rated for maximum capacities of 300 and 600 amperes, respectively. It is stated that they are generally applicable to all heavy-duty requirements. They are arranged for either two- or three-wire control; have continuous-duty operating coils; highly efficient magnet structure; and exceptionally heavy, butt-type, solid-copper contacts. An air cushion absorbs the shock of the magnet on closing, thus reducing wear and making the contactor operate more quietly. For general use, the 300-ampere contactor is mounted in a wall-type enclosure, and the 600-ampere size is in a floor-type case.

High-Speed Striper

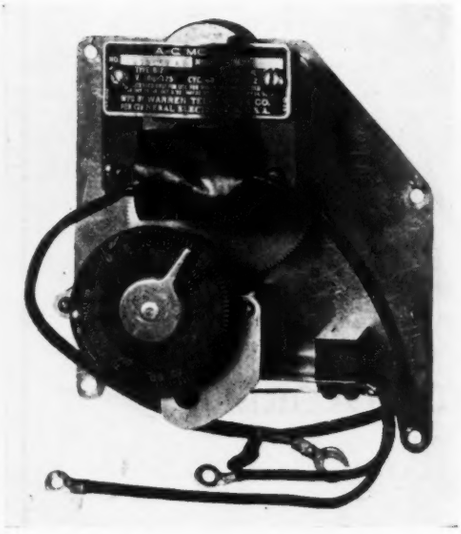
IT IS announced by Paasche Airbrush Co., 1909 Diversey Parkway, Chicago, that a high-speed production striper, which until recently has been used exclusively by the Hudson Motor Car Co., has now been placed on the open market. In addition to interchangeable nibs for producing a variety of stripes and adjustable thumb-action lever for slow or fast color control, this Type UHT striper is said to embody a number of other exclusive features. Among these improvements are included a revolving ball-bearing turret head with auto-spring stop for circular striping, compression needle-packing to eliminate sticking of the needle or leaking of color, and an adjustable swivel guide with or without



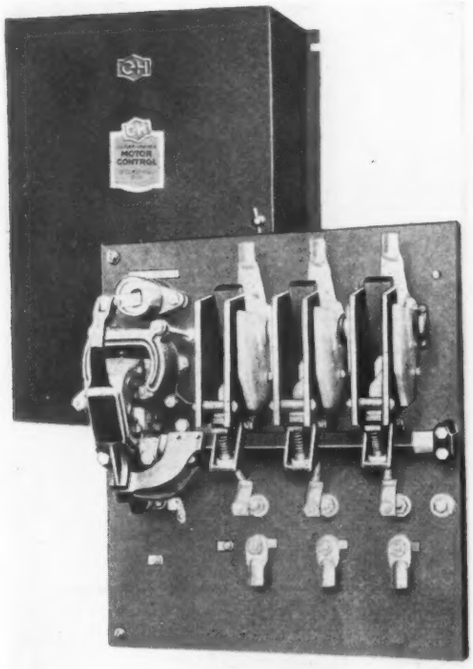
Crank-type shaper



Static-proof belting

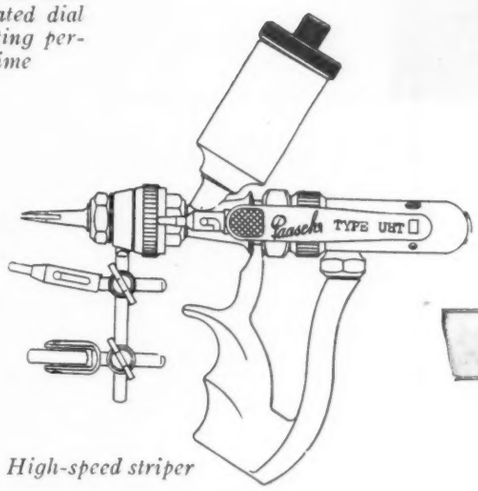


Mechanism of automatic time switch showing graduated dial with pointer for adjusting percentage of "on" time



Heavy-duty contactors

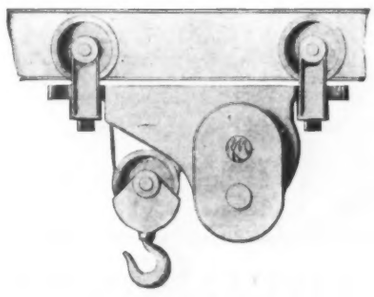
guide wheel. The striper is of light but durable construction, with removable handles and guides allowing access to narrow places. Nibs or striping blades are available in a variety of styles and sizes.



High-speed striper

Electric Hoist

THE Hoist & Crane Division of Robbins & Myers, Inc., Springfield, Ohio, has placed on the market recently a small, light, compact electric hoist. This Bantam hoist has a capacity of 500 lb. and a speed of 30 ft. per min. Because of its light weight and small size, the new machine is believed to be adapted to many applications where electric hoists have not been practical heretofore. It is especially suited for installations where large quantities of light-weight material must be handled rapidly.



Electric hoist

The hoist is manufactured for use on either a-c. or d-c. circuits and with either rope or push-button control. The frame is designed for either the standard I-beam trolley or any make of mono-rail trolley. Among the structural features of the hoist are included simple and positive lubrication system, full protection against dust and moisture, and durable aluminum finish.

Automatic Time Switch

FOR closing and opening electric circuits at short predetermined intervals, General Electric Co., Schenectady, N. Y., has developed a new automatic time switch. Designated as Type TSA, this switch automatically energizes a circuit to control intermittent operation of electric equipment. The time cycle may be a few minutes or several hours, and is repeated continuously. Owing to the short time of a cycle—one complete "on" and "off" period—the operation is without regard to the time of day.

The time cycle depends upon the gearing used, and is fixed in each case at the factory. In certain forms, however, the relative amount of time "on" during the complete time cycle can be varied by the user. The switches are single-pole, with one-way or two-way contacts, and are rated 5 amperes at 115 volts or 2½ amperes at 230 volts. On circuits of higher ampere rating a magnetic switch can be employed in conjunction with the time switch.

The contact-making device is driven by a Warren "Telechron" synchronous motor, thus insuring accurate and reliable timing when connected to an a-c. supply having the usual well-regulated frequency. The device is housed in a sheet-metal, dustproof case for indoor mounting, with knockouts and a hinged front cover that is secured by a latch at the top, which may be sealed. A hanging lug is provided at the back for wall mounting.

DURENE

REG. U.S. PAT. OFF.

NATURAL, BLEACHED AND COLORED

YARNS

MAIN OFFICE

123 SOUTH BROAD STREET

PHILADELPHIA

Manning St.
HIGH POINT, N. C.

432 Fourth Ave.
NEW YORK

418 Franklin St.
READING, PA.

323 So. Franklin St.
CHICAGO, ILL.

James Building
CHATTANOOGA, TENN.

52 Chauncy St.
BOSTON, MASS.

HAMILTON, CANADA

LOS ANGELES

MILLS

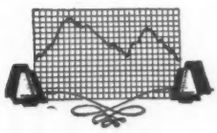
CHESTER, PA.

BELMONT, N. C.

ABERFOYLE MANUFACTURING COMPANY

Representatives in All the Principal Countries of the World

TEXTILE WORLD ANALYST



Shadows of Doubt on Stability of Raw Wool

Yarns and Cloth Cannot Display Independent Strength, Says Dr. Haney

SUMMARY

The supply of raw wool is abundant, while the demand is unfavorably affected by business depression and lower prices of other fibers. Perhaps stabilization measures can hold domestic prices steady, but the market looks a little lower. Cloth and yarn do not seem to be in a position to show independent strength.

•

The analysis and forecast by Dr. Lewis H. Haney, Director, New York University, Business Research Bureau, which regularly appears on this page, considers various branches of the textile industry from week to week. The conclusions reached in the Analyst are mostly forecasts and generally apply to a time two or three months ahead. The Analyst is based on statistical data and does not reflect temporary trade sentiment.

THE chief developments in the wool manufacturing industry which came to light in July were (1) the decline and the partial recovery in prices at London, followed by weakness at the Liverpool auctions; (2) the increase in domestic manufacturing activity in June; and (3) the American Woolen Co's. drastic cut in the prices of tropical suitings.

The weakness abroad might have been greater had there been no artificial restriction at the London auctions. Bradford tops were reported to be selling below the cost of raw wool, but there has been some recovery from the mid-July low in several grades.

In contrast with the price declines abroad, has been the relative stability in domestic wool markets at the time of the year when receipts are heaviest. This stability may have been caused by the moderate improvement in manufacturing activity, or, in part, by stabilization efforts of the co-operatives. However, the National Wool Marketing Corp. is responsible for the statement that domestic prices are far below foreign prices for similar grades.

The cloth markets remain rather dull. The benefit of the decline in raw wool is being passed on to the consumer in the form of lower goods prices, but these are not likely to cause much stimulation of buying until business conditions are more settled.

The Favorable Factors

1. The London auctions closed with fine merinos recovering part of the opening loss; foreign buying was a source of strength.

2. Stocks of wool in Australia on June 30 were only 108,000 bales. The Brisbane auctions closed firm.

3. The Raw Wool Marketing Corp. states that foreign raw wool prices must decline 15 to 35% to reach parity with similar domestic grades.

4. The corporation has acquired 115,000,000 lb., or at least one-third of the domestic clip.

5. Domestic prices have been fairly stable during weakness abroad, and at a period when domestic stocks are at a maximum. Fine grades are firm to strong.

6. Mill consumption and machinery activity increased in June.

7. Bradford top prices increased recently.

8. Stocks of cloth, as reported by the Wool Institute, decreased 0.5% in June.

9. Style trends appear to favor wool.

The Unfavorable Factors

1. Withdrawals at the London auctions were heavy and the period of selling was shortened; coarse wools were weak. Liverpool auctions opened 5 to 10% below the previous close; American competition was lacking. English manufacturers fear no scarcity of any grade of wool.

2. The 1930 domestic wool clip is estimated at 327,989,000 lb. against 308,947,000 lb. last year.

3. Receipts of raw wool at Boston have been running ahead of last year.

4. Stocks of tops in continental commission combing establishments on July 1, were 2,000,000 lb. larger than on June 1. Bradford tops are reported to be selling below the price of raw wool at London.

5. The statistical position of worsted yarn weakened in June.

6. Wholesale dry goods sales fell off sharply.

7. The American Woolen Co. cut prices to 1914 levels on some lines.

8. General business, especially automobile production, continues depressed.

9. The recent decline in raw cotton prices removes the advantage of raw wool as a competitive fiber.

The unfavorable factors seem to be fully as strong as the favorable. The declines abroad are anything but encouraging. This is especially true when it is remembered that artificial methods were used abroad to prevent prices from going still lower. In general, demand is poor the world over, while supply conditions promise to remain easy.

Wool Manufacturing Improved

Activity in the wool manufacturing industry in June made the best showing for many months. Not since April, 1929, have the indexes of spindle activity and of mill consumption moved up together as they did last month.

The index of spindle activity in June

When one fabric outsells another . . . . compare the yarns . . . .

Given two cotton fabrics, either knit or woven. One sells fast—the other slow. Weigh their individual features carefully. Perhaps the quick moving fabric has better style appeal, finer finish, smoother texture or clearer, more beautiful dyeing or printing.

But basically, all these features depend on the quality of the yarn from which the fabric is woven or knit. That's the important point—the quality of the yarn largely determines the salability of the fabrics.

And that is why a number of mill executives, whose fabrics are market leaders, use only Quissett Yarns.

Quissett is spun from early bloom cotton—Egyptians, Sea Island, Peelers, Sakelarides, Pimas and Peruvians; in all numbers and descriptions. It is strong, even, uniform, dependably right in twist. It keeps production in the weave shed smooth and low in cost. Quissett quality plays an important part at every step in the process, from the very beginning to the final sale of the finished fabric.

Samples in your usual put-up are ready for you at any time you say. Write us.

Quissett Mill
New Bedford, Mass.

Wm. M. Butler, Pres.
Edward H. Cook, Treas.
Thomas F. Glennon, Agent

QUISSETT MEANS QUALITY

QUISSETT COTTON YARNS

Carded and combed cotton yarns in all numbers and descriptions

was 81.4% of the average for 1921-1928, against 75.7% in May and 100.1% a year ago. June was the second successive month of rising trend, and the gain brought the adjusted index up to the highest level since last November.

The index of mill consumption of raw wool did not increase quite so sharply as did the index of machinery activity. The June figure was 74.7% of the average for 1921-1928, against 71.0% in May and 104.6% in June, 1929. This gain did not offset the May decline, with the result that the index was, with the exception of May, at the lowest point since 1924.

Usually the end of a sustained decline in the index of mill consumption is indicated when the curve falls below that of spindle activity. (Fig. 1). There is nothing certain or definite about the subsequent improvement, however. Certainly the wool industry has been affected by the condition of general business and there is little prospect of early improvement in the situation. The P/V line continues to decline and is below normal. The possibility exists of the wool industry moving independently of general business, but in view of the continued decline in purchasing power, it is not likely that the upswing begun in May will be long sustained or that it will carry to a very high level.

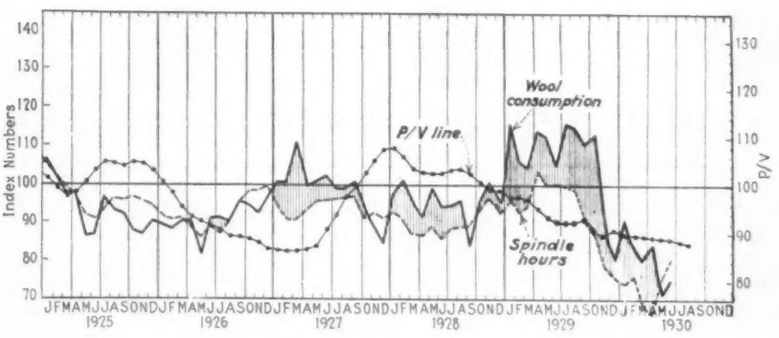


Fig. 1. GENERAL BAROMETER OF WOOL INDUSTRY: Wool Consumption—Grease equivalent; adjusted for number of working days and seasonal variation, 1921-1928 = 100 (Dept. of Commerce). Spindle Hours—Average of woolen and worsted spindles, per cent active hours to total; adjusted for seasonal variation, 1921-1928 = 100 (Dept. of Commerce). P/V Line—Ratio of general commodity price index to volume of trade (Bureau of Business Research).

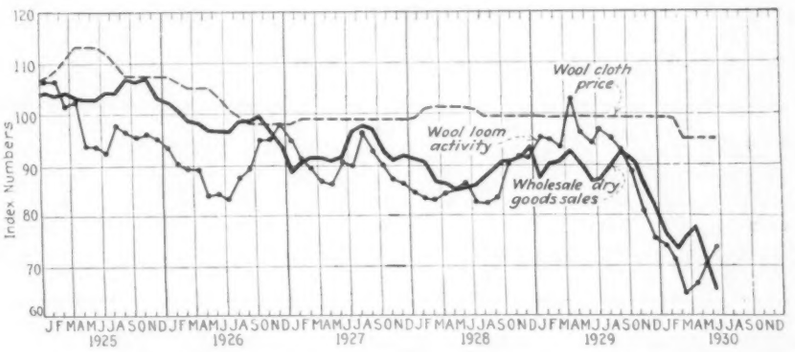


*Fig. 2. WOOL CLOTH BAROMETER: Wool Cloth Price—*TEXTILE WORLD *Index; Looms—Adjusted for seasonal variation, weighted average, Dept. of Commerce; Wholesale Dry Goods Sales—Adjusted for seasonal variation, three-month moving average, Federal Reserve Board; Average 1921-1926 = 100 for all indexes*

Raw Wool Market Stable

The increase in manufacturing activity has brought firmness in the raw wool markets at the season of heaviest receipts (which are running well above a year ago). The TEXTILE WORLD index of raw wool prices during July was at 65.9% of the 1921-1928 average. This compares with 65.4% in June and 91.2% a year ago.

The recent stability might be considered either as an indication of strength in the face of large receipts, or an indication of sluggishness in view of the increased activity of the mills. At any rate, raw wool prices have held up better than have general commodity prices or the prices of cotton, silk, and rayon. In fact, raw wool may now be considered to be as dear as cotton, and considerably more so than silk.

While the tariff may prevent any great effect of foreign weakness on domestic markets, and although the domestic clip is out of growers' hands, supply conditions are easy. No stimulation from the goods market seems imminent, and, were it not for the stabilization efforts of the National Raw Wool Marketing Corp., raw wool prices might decline further. But with an avowed policy of stabilization by that corporation, which controls more than one-third of the clip, a firm though irregular market seems probable.

Yarn Position Weaker

The TEXTILE WORLD index of worsted sales yarn prices during July was 77.8% of the average for 1921-1928, against 78.8% in June and 94.1% a year ago. Yarn prices were somewhat weaker than raw wool and spinners' current replacement margin were slightly lower.

Spindle activity has been increasing for about three months, and apparently has become a little too great compared with loom activity. The June figures indicate a weaker statistical position for yarn, and this will probably find expression in lower replacement margins rather than in sharply declining prices. It is now probable, however, that yarn prices will not be quite so strong as those of raw wool.

Wool Cloth Markets

There has been no fundamental improvement in the wool goods markets recently. The drastic price cuts of the American Woolen Co. may help to stimulate business, but that will probably take a considerable amount of time. Wool cloth prices are becoming more and more reasonable, but they still are adversely affected by cheap cotton and silk. An unfavorable condition affecting wool goods is brought out in a rather startling manner by the report that liabilities in the garment and clothing industries are 200% or more above last year.

It is difficult to see where an increased demand for wool goods is to come from in the near future. According to available indexes general purchasing power is poor. Labor conditions are getting worse. The buying power of farmers is reflected in the 12-point drop in farm prices between June 15 and July 15. Wholesale dry goods sales in June were the lowest since 1921. July reports do not indicate much change. The upholstery end has been affected by the curtailment of automobile production.

Loom activity, however, continues to gain. The Wool Institute figures indicate an increase in production and a decrease in inventories, which facts suggest some improvement in the quantity demanded.

But, prices declined again. The Bureau of Labor Statistics index of woolen and worsted goods prices in June was 87.4% of the 1921-1928 average. This was only slightly lower than the May figure of 87.7%, but is well below the 96.5% a year ago. The decline in this index has been about equal to the decline in the raw wool price index, thus leaving the current replace-

MONOMAC SPINNING CO. *French Spun worsted yarns for knitting and weaving.*

ARLINGTON MILLS *Bradford Spun worsted yarns for knitting and weaving.*

ACADIA MILLS *Mercerized yarns—natural, dyed or bleached.*

NONQUITT MILLS *Combed yarns spun from American or Sakellarides cotton.*

CRAMERTON MILLS *Combed yarns for knitting and weaving.*

TALLAPOOSA MILLS • MARY LOUISE MILLS *High-grade carded weaving yarns.*

WILLIAM WHITMAN COMPANY, INC.

Selling Agents

BOSTON
78 Chauncy Street

NEW YORK
261 Fifth Avenue

PHILADELPHIA
1600 Arch Street

CHICAGO
300 West Adams Street

CHARLOTTE
Commercial Bank Building

ment margin unchanged. There has, however, been no change in domestic or world conditions which would make for a strong and active goods market. With dry goods sales so poor and loom activity increasing, the chances for price increases in wool cloth appear to be slight. Yet the control of production will tend to stabilize the goods market. The stability of raw wool and of worsted yarn in recent months is likely to be followed by fairly stable cloth.

The Textile Trend

COTTON TEXTILE MARKETS: Gray goods trading was quiet preceding the Government cotton report of Aug. 8. Print cloth prices softened in several centers late last week and easier prices were available early in the current week. An outstanding feature was the new price of 14½c. made on 80-square percales. This, it is hoped, will increase consumption and make further price-cutting impossible. Trade reaction indefinite due to newness of move.

WOOL TEXTILE MARKETS

Wool goods markets are sluggish and have been uncertain ever since price cuts on staples made recently by the American Woolen. Tropicals are moving ahead slowly, but other branches of the men's wear market are dull. Conditions are slightly better in women's wear, but, even here, buying is spotty. Tweeds have sold in fair quantities with the business coming in spurts of a day or so. Generally expected that dress coatings will be more important than fancy goods during the coming season.

KNIT GOODS MARKETS

Knit goods markets are slightly improved. Hosiery demand continues hesitant, but prices are firmer; several important mills see the hosiery market as due for a real pick-up in early fall, and are planning to manufacture for stock. Low-priced winter-weight underwear is moving actively, and mills expect sales to equal those of 1929. The higher-priced heavyweights also improved, but demand is still backward. Lightweights are steady. Bathing-suit producers plan a downward revision on all 1931 lines which will open about Aug. 15. The new bathing-suit lines will stress quality, and producers look for a trade-up.

SILK TEXTILE MARKETS

Raw silk continues upward trend, with prices 10c. above last week. Buying is more confident, but is confined to nearby delivery for the most part; manufacturers are still apprehensive of the possibility of another price slump. July consumption figures show an increase of 10,552 bales. Spun silk is quiet, but firm, with a light spot and future coverage. Thrown silk is steady, with a stronger undertone; fair call for grenadine twist yarns. Broadsilk demand has improved, especially at the piece goods end.

Mill Shares Move Sluggishly

Downward Trend of Earnings Continues Main Feature

BOSTON.

ANOTHER quiet week in mill shares with buying interest so restricted that good bargains are possible occasionally, as witness 10 shares of Plymouth Cordage purchased at the Boston stock auctions at 71¼, off 10¼ points from previous sale. The low price paid had apparently no relation to the actual condition of the company, just a lucky bid by some wide-awake individual. Only 180 shares were sold at the auctions. On the Boston and New York exchanges fluctuations in the few textile shares listed were very small, few offers, few purchases.

A group of leading New Bedford mill shares show an average price for the week of 30.65 as compared with 30.69 the previous week and 35.85 some three months ago. A Fall River mill group averaged 27.61 this week as compared with 28.83 last week and 31.00 some three months ago. Sales of Berkshire Fine Spinning common were reported at 12 and offerings were listed at 12½ with bids at 11½. A few shares of Associated Textile stock sold in the auctions at 35 to 36½ and there are plenty of offerings at that figure with no firm bid. Pepperell sold at 84 and more is available at that figure, with tentative bids around 82. William Whitman preferred was traded this week at 69 to 71 which is slightly higher than the market a week ago. Some strengthening was noted in Wamsutta Mill stock, attributed by some to increased activity in the sheeting department. Trading took place at levels between 14 and 15, and there was a firm bid for shares at 14. No great volume of stock changed hands. There was moderate activity in Potomska stock with buying reported at 30 to 31.

MERRIMACK PASSES DIVIDEND

Passing of the Merrimack Mfg. Co., Lowell, Mass., common dividend, taking this issue out of the dividend-paying ranks for the first time since March, 1916, is a commentary on the downward trend of earnings in the textile as in other lines of industry. Merrimack enjoyed two years of remarkable prosperity during the height of the textile depression. In 1928 it earned $1,307,561 after normal charges but before extraordinary chargeoffs for inventory and contingency reserves, equal after preferred dividends to $44.55 per share on the 27,500 shares of common, and in 1927 it earned $1,111,368 on the same basis, or $37.41 per common share. The company achieved the unusual feat of increasing common dividends from a $7 rate in 1927 by successive steps to $8, $10 and finally paid at an annual rate of $12 from September, 1928, through March, 1930. During the latter part of last year earnings declined abruptly, and the company reported for 1929 net of $507,885, equal to $15.47 per common share. Prices were demoralized alike on the specialty pile fabrics for automobile, furniture and dresses and on the print cloths made in the South. No real improvement has been seen as yet, while steadily declining cotton values have caused inventory shrinkage. As a result of this situation, the company halved its common dividend due June 1 and now has omitted the Sept. 1 payment entirely. The stock is now quoted at 45 bid and 48 asked, compared with 180 early last year.

MERRIMACK DIVIDEND RECORD

The following shows Merrimack Mfg. Co.'s common dividend record during the last seven years: March 1, 1922, to Sept. 1, 1923, $6; Dec. 1, 1923, to June 1, 1927, $7; Sept. 1, 1927, $8; Dec. 1, 1927, to June 1, 1928, $10; Sept. 1, 1928, to March 1, 1930, $12; June 1, 1930, $6; Sept. 1, 1930, omitted.

BIGELOW-SANFORD STRONG POSITION

Earnings of the Bigelow-Sanford Carpet Co., Inc., for the six months ended June 30, 1930, totaled $1,157,016 before depreciation, taxes and note interest. After these charges, and after dividends on preferred stock, totaling altogether $713,076, there was a balance of $443,939 available for common-dividends, equaling $1.41 per share on 314,379 shares. This compares with $802,001, or $3.33 per share on 240,340 shares of the former Bigelow-Hartford common stock, earned during the same period last year. The strong financial position of the company, as emphasized in the report of President John A. Sweetser, is indicated by the fact that on June 30 the company had on hand $2,706,862 cash as compared with $501,777 on Dec. 31, 1929, after having reduced the 6% serial notes from $5,000,000 to $4,000,000, the 1930 and 1931 maturities having been called in advance and paid on May 15. Inven-

Durene *to have strong*

NATIONAL ADVERTISING - - *during fall months*

YOU know how the national advertising of the Durene Association of America has steadily increased the demand for durene merchandise. *Now, beginning in September, the Association launches a strong new advertising campaign to help sell your durene numbers.* The magazines in which the advertising will appear are:

VOGUE	BUTTERICK QUARTERLY
HARPER'S BAZAAR	GOOD HOUSEKEEPING

These advertisements show durene hosiery, underwear and other garments for men, women and children. It pays to use the durene stamp or label granted you by the Durene Special Licensing Plan, and thus get the benefit of this sales help.

If you have not yet learned of the extensive sales promotion movement behind durene—the finest mercerized cotton yarn ever produced—write today for full details.

Durene Association of America, 250 Fifth Ave., New York City

Durene

Quality begins with the yarn

MEMBERS

ABERFOYLE MANUFACTURING CO., Philadelphia, Pa.
AMERICAN YARN AND PROCESSING CO., Mount Holly, N. C.
DIXIE MERCERIZING COMPANY, Chattanooga, Tenn.
HAMPTON COMPANY, Easthampton, Mass.
CLARENCE L. MEYERS, INC., Philadelphia, Pa.
SPINNERS PROCESSING COMPANY, Spindale, N. C.
STANDARD-COOSA-THATCHER COMPANY, Philadelphia, Pa.

tories also have been reduced, from $15,299,008 to $11,473,618 during the six months period. Total current assets on June 30, 1930, were $18,469,300 and current liabilities $1,392,717, leaving net working capital of $17,076,583. On Dec. 31, 1929, current assets were $21,096,098 and current liabilities $2,749,381, leaving net working capital of $18,346,717. A regular quarterly dividend of $1.50 per share on common stock was declared by the directors in addition to the two regular quarterly dividends of 1½% on the preferred stock.

Real Silk Hosiery Profits Smaller

Real Silk Hosiery Mills, Inc., Indianapolis, Ind., reports for six months ended June 30 profit of $600,619 after charges, but before federal taxes, against $1,041,000 in the first half of 1929. Profit for the first six months this year exceeds any similar period since 1925 except first six months of 1929. President Farrell stated in part: "While our sales have shown an increase each month, and our plants have run to capacity both day and night during the entire period, our profits were not so large, due to reduction in selling price of raw silk used during the period for which it had been purchased."

Through typographical error the estimated earnings of Arlington Mills for half-year ended May 31 were placed at $150,000 before depreciation. The figure should have read $350,000.

Boston Stock Auctions

The following sales of textile shares were made at Wednesday's auctions:

Shrs.	Mill	Par	Price	Change
50	Associated Textile	...	35-36½	.....
25	Naumkeag	100	85-88	.....
60	New England Southern com	...	$3 lot	.....
20	Lancaster	100	$1½ lot	.....
10	Plymouth cordage	100	71¾	—10¼
15	Nashawena	100	20½	+½
180	Total			

Southern Market Eases Again

Charlotte, N. C.—A further decline of 64c. a share was registered in the average bid price of 25 common stocks of southern cotton mills for the week ended Aug. 2, according to the weekly market letter furnished by R. S. Dickson & Co. The closing price stood at $70.32 a share as compared with $70.96 for the previous week.

Firmer Prices for Burlap Spots

Spot burlap prices at mid-week was firmer, but there was an easing of quotations of September, October-December shipments. The weakness of the end-year shipments was attributed to a postponement of a meeting in Calcutta at which mill men were to consider a proposal to curtail production.

The 8 oz. 40s for spot and August shipment were 4.80c.; two weeks arrival, 4.75c. The 10½ oz. 40s for spot were 6.10-6.20c.; two weeks arrival, 6.10-6.15c.; August shipment, 6.15c.

Yarns Await Cotton Stability

Some Easiness in Face of Aug. 8 Government Report

Philadelphia

While no changes of moment in list prices for cotton yarns were made this week or hinted at by the yarn trade in Philadelphia, carded yarns may be said to have shown a slight easing in this area. Commission houses, it seemed, while waiting for the crop estimate and condition report, were inclined to take sides with consumers of yarn in the theory there was more likelihood of a drop in cotton than an advance, following the Government figures. In a doubtful mood, and noting no demand, sellers other than spinners were believed to be discounting the Government possible showing, and some sales are said to have been made at a substantial shading.

Buyer and seller simply were speculating on statistics which then were a closed book, with sellers in the position of giving odds, for there seemed no getting away from a fear that cotton by next week might be selling closer to 10c. than at any time since the World War. Friends of higher price cotton were scarce. For a full week the bears were virtually in control of the Philadelphia cotton yarn market, more especially as related to the carded group.

Prices Lack Firmness

The asking price for average good carded is within the range of 22 to 22½c. for 10s single frame spun average quality. The week started with the trade inclined to hold for the top of the range. Recessions came by the middle of the week, and while transactions were in strictly orderly fashion and traders absolutely free from a panicky feeling, index numbers of carded yarn were softer, decidedly. Warps, 20s-2, were off ½c. from the previous week, being quoted freely at 24c. A half cent also was lopped from last week's price of 30s-2 warps, 29c. being accepted for almost any delivery desired by buyers. These were the weakest numbers in the list.

Weaving numbers appeared in slightly better call than yarns for the knitting trades. There was some little interest in spot deliveries for light-weight underwear, but shipments were on the fill-in order, and were mainly, to a sectional group of mills as represented by up-State Pennsylvania manufacturers.

Undelivered Yarn a Problem

Combed yarns are described as especially slack. The more important operators in this group say their regular customers are taking in yarns ultra-conservatively, shipments being well under 50% of what it might be assumed manufacturers would be using. Deliveries against contracts continue unsatisfactory, with some concerns buying in the open market at a variety of prices, instead of drawing against what it is assumed they eventually will have to settle for on some sort of basis.

Notwithstanding the lack of new business and holdings of undelivered contract yarn, it was declared in the trade the prices given in most trade publications were too low. A leading establishment gives its minimum for 18s single combed 35½c., which represents no change from last week. Another quotation, from a large commission house, is 1c. less. Prices of two-ply combed are marked up by one large concern representing a group of mills, by around a cent from last week's list, 90s being advanced 5c.

There is a mixed sentiment as to the mercerized yarn situation, some interests leaning to a belief improvement is near, while others maintain a decidedly bearish attitude. List prices remain as they were. What prices are being accepted is not disclosed. The market for practically all mercerized numbers continues quiet, as a reflex of the apathy that usually prevails during the vacation season.

●

Boston.—Yarn prices are around the low level of the year and opinion is 50-50 as to whether further recessions will occur. Much will depend on the size of the new crop, a conservative interest prior to the issuance of the Government report predicting 15 million bales, a bearish factor under present trade demand at home and abroad. The yarn market for the week is generally unchanged, sales chiefly for small quantities for quick delivery. In some instances interest is displayed in prices. Buyers generally hesitate to place orders with the market for raw cotton so unsettled, but small orders are reported from some of the larger operators who take yarns occasionally for near needs. The latter seem inclined to buy fair size quantities for future delivery but at their own ideas of value. Spinners feel that such levels are too low and hesitate to take on business for deferred delivery on the present market and at current prices.

Although no further weakness developed in the market for cotton yarns during the week, quotations continue irregular. Views of sellers continue mixed, some feeling that the immediate outlook is none too promising. With demand for yarn as it has been in the last few weeks, it would be unreasonable to expect prices to show much

RAYON ADDS
9 MONTHS OF LIVELY SELLING TO COTTONS

COTTON and fine Du Pont Rayons have gone on record as good "mixers." Dress manufacturers who expect to cut several hundred thousand yards of the new 1930 rayon and cotton crepes claim that they open a brand-new market for volume fabrics. They further state that Du Pont Rayon, used with the present skill, will add an extra nine months of lively selling to cottons for winter dresses. No other fibre provides so perfectly the things that cottons need to capture the winter market.

6 POINTS TO CHECK IN DU PONT RAYON AND COTTON CREPES

1—Rayon takes a brighter dye . . . gives liveliness of color tone to dark cottons.

2—Rayon, being a perfectly even, continuous fibre, gives sheerness, body, and drape to cotton weaves without making them thick.

3—Rayon is an economical mixer. It gives suppleness to cotton without shooting the price above the volume market.

4—Rayon gives the rich glow that keeps dark cottons from looking dusty when they are worn with deep-pile fabrics.

5—Rayon combined with cotton makes fabrics that are easy to launder—that will not wrinkle easily.

6—Rayon stands out beautifully in the new jacquard effects.

EXAMINE PAR CREPE . . . Par Crepe, a featured fabric in Storyk's fall line, is a live example of the way cotton combined with Du Pont Rayon can be styled for fall.

DUPONT RAYON

REG. U.S. PAT. OFF.

Members of Rayon Institute of America

LOLUSTRA keeps its low lustre after it is laundered. That's one reason why knitters and weavers who can't afford to gamble on artificially de-lustred rayons buy Lolustra. The subdued glow that it gives to fabric is inherent in the yarn . . . not painted on.

strength. Dealers state that spinners are now in the period of maximum curtailment, and are not interested in small to medium sized orders for August or early September delivery if a further price reduction is necessary. Spinners chiefly are interested in booking fall business, at prices giving the spinners at least cost, the rest at prices showing spinners a reasonable profit margin.

Production has been sharply reduced, but still continues in excess of demand. Some of the trade feel that buying is now at low ebb and that any change should develop more interest in actual booking of orders. Spinners endeavor to stabilize prices as much as possible but with a falling raw material market and the concessions made by certain mills in need of business particularly in coarse counts, their efforts are not particularly successful.

•

CHATTANOOGA, TENN.—The Chattanooga yarn market continued dull during the week opening on Aug. 4, according to leading local brokers. There were no changes in prices on either the cotton or thrown silk. Double extra thrown silk was still being offered at $4 a pound.

In carded cones 10s are offered at 23½ to 24c. by dealers. In mercerized yarn 60s-2 is quoted at 78c. and 80s-2 at $1.05. Combed singles are being offered at 36½c. for 18s and 75c. for 70s.

•

NEW YORK—Bids were more numerous in the carded yarn market recently, but few orders of consequence developed. Most of the bidding was about 2c. a lb. lower than spinners would consider and there was practically no opportunity to bring buyers and sellers together. Most of the inquiries were of the "feeler" type from consumers checking up on present trends of prices.

Dealers stated that actual business was unimportant and confined to small lots scattered over a variety of descriptions. Prices seem to be firm at nominally unchanged levels, but the small volume of business did not afford an accurate test of the market. Many plants continue to run on reduced operating schedules.

Worsted Yarns Mostly Steady

Mark Down Is Recorded in English-Spun 2/20s

PHILADELPHIA.

PRICES for worsted yarns appear to be steady in an inactive market. The situation this week as regards new business is said by spinners to represent the depths of depression for this year. The fact prices are holding for near the list quotations is the one satisfactory phase of the lull, which applies with about equal force to English system and French-spun yarns, and to both knitting and weaving numbers.

FIRMNESS IN FRENCH-SPUN

Firmness seems pronounced in the French system division. This is accounted for with the explanation that prices had been driven to the very bottom and that doubtless the only reason there have been no reports of declines is that an irreducible minimum had been established. The absence of recessions, it is pointed out, cannot be ascribed to demand, for this is an aspect of the market that is said to be lacking to as great an extent as witnessed these many years. The failure of prices for French spun yarns to move further downward therefor must be attributed to their having reached rock bottom, a level where spinners must decide whether to do business without profit or hold for figures which for the moment bring no response from buyers.

It is estimated by spinners that spindle activity in the Philadelphia territory is on a basis of 52% of single shift capacity, and that most of the production can be moved to consuming mills. The men's wear trade is receiving small shipments against repeat orders, and the volume of deliveries is said by shippers to be unusually small for this period, even after making allowance for conditions in the commodities markets.

EXPECT KNITTERS TO BUY

With trading in knitting yarns almost at a standstill, spinners are looking for a buying movement at almost any time, on very short notice. They are virtually certain of a spell of brisk buying, but no one can tell when it may start. It may be a fortnight in the future, and it may develop in less than a week. This indicated assurance of some trading just around the corner is having a steadying effect on prices for the finer yarns of the better types, which in turn puts 2-20s in a weaker position, as indicated by a markdown of 2½c., leaving new prices $1.02½ for 48s, $1.05 to $1.07½ for 50s, $1.12½ to $1.15 for 56s, $1.30 to 1.32½ for 60s and $1.37½ to $1.40 for 64s.

A report was in circulation in the trade early in the week that a quantity of 2-20s (50s) had been sold for an even dollar. This could not be confirmed, and spinners doubting it said there was a possibility a sale at that figure may have been made to a jobber. The report had no effect on the market.

Yarn consuming mills in the knitting trades may be said to be virtually a unanimous body in passing to spinners the entire responsibility for completion of late orders from jobbers who have yet to buy the bulk of their fall sweater requirements. This practically puts the jobber in the position of placing dependence upon the spinner, it is pointed out. The latter, speaking collectively, is said to be accumulating moderate stocks of popular counts for hurry-up shipment, and considering the lateness of the season for filing specifications, it appears there will be a considerable call from distributors for first aid later on.

◆Spun Silk Quiet; Prices Firm

HOT weather and the usual August lull have combined to slacken manufacturer interest in spun silk. Spinners report a very quiet market, and they do not look for any real improvement before the end of the month. There is a light demand for spot shipment of small-sized orders, and some mills have considerable fall business on their books.

The lull has not weakened the confidence of the market, as sales now are about normal for this time, spinners assert. Manufacturers are still uncertain regarding their winter production schedules and for that reason are confining yarn purchases to immediate needs. Both buyers and sellers grow more optimistic as to prospects for the coming season, and Labor Day is expected to mark a turning-point.

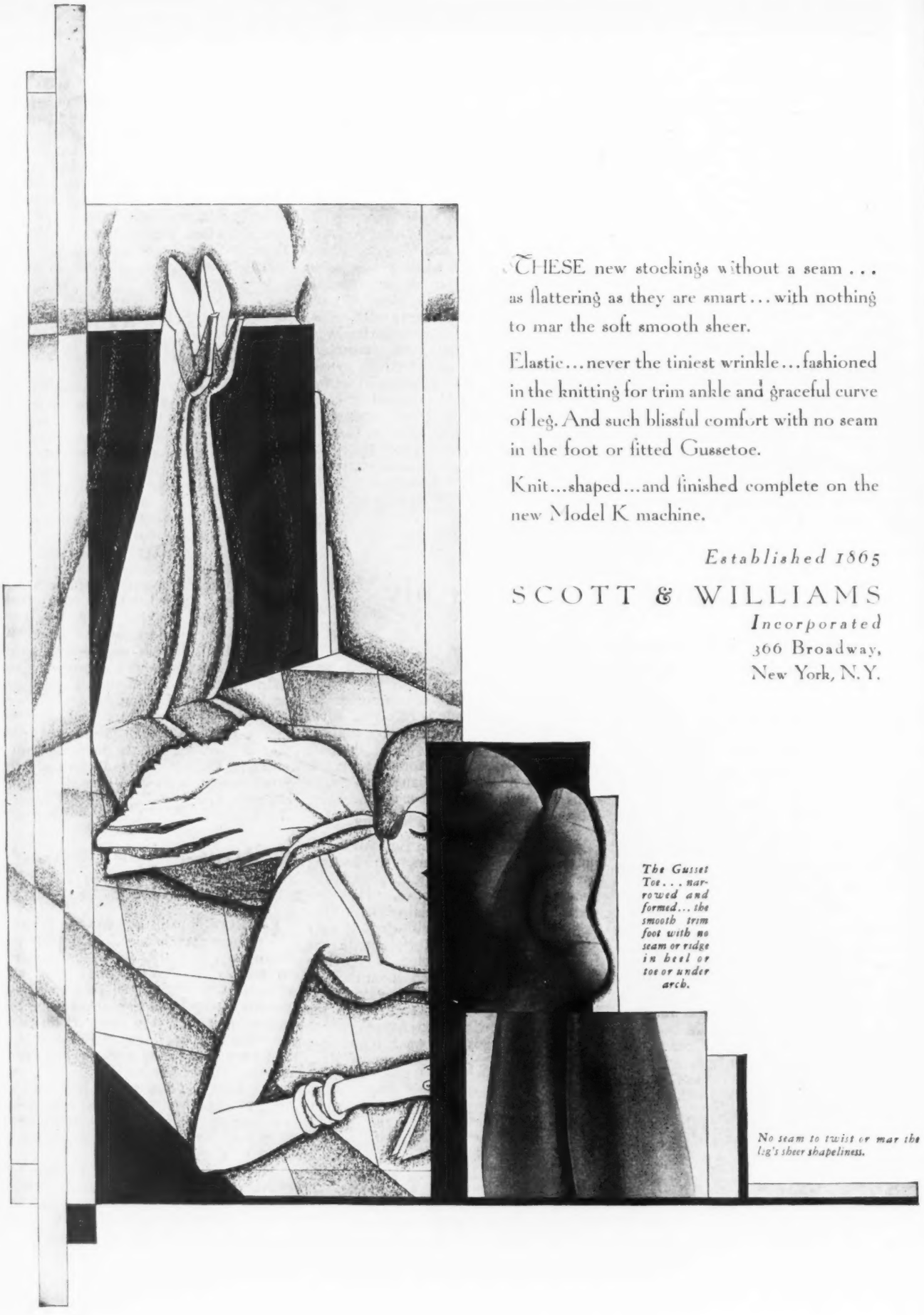
Stocks of spun yarn in spinners' hands are moderate. Mills are producing to order for the most part, and no increase in output is likely until the mid-summer lull has passed. Prices continue firm.

◆Stronger Undertone in Thrown Silk

THROWN silk is steady, with a stronger undertone. Mill men are more confident this week, and incline to the belief that business now will climb slowly. Several mills, which have proved a true barometer previously, are beginning to increase their production; they had been operating at 100% in May and June, and fell to 40% in July; now the pendulum has swung in the opposite direction and output has risen to 60% of capacity. These throwsters see a gradual firming through the remainder of the month, and a definite improvement in September.

The prevailing low prices are attracting considerable business. Broadsilk mills placed fair-sized orders this week, mostly for spot and nearby shipment. Broadsilk production for fall is still light and there is a tendency to defer deliveries of yarn.

Hosiery knitters are still backward in buying. There is a steady call for



THESE new stockings without a seam . . . as flattering as they are smart . . . with nothing to mar the soft smooth sheer.

Elastic . . . never the tiniest wrinkle . . . fashioned in the knitting for trim ankle and graceful curve of leg. And such blissful comfort with no seam in the foot or fitted Gussetoe.

Knit . . . shaped . . . and finished complete on the new Model K machine.

Established 1865

SCOTT & WILLIAMS

Incorporated

366 Broadway,
New York, N.Y.

The Gusset Toe . . . narrowed and formed . . . the smooth trim foot with no seam or ridge in heel or toe or under arch.

No seam to twist or mar the leg's sheer shapeliness.

grenadine twist yarns, but trams are sluggish. Producers of grenadine hosiery see a good Christmas prospect for these lines, and some mills have begun to build up stocks in anticipation of an active holiday call.

Rayon Tone Improved

Manufacturers Now Show Disposition to Buy

THE tone of the rayon yarn market is slightly improved and while business is far from spirited, manufacturers show a disposition to buy. Demand is mostly from the knitters; the weavers are making numerous inquiries and are expected to begin covering shortly for fall needs but at present they are placing little business. Producers are encouraged by a slight tendency toward futures; orders for from six weeks to two months delivery were placed this week. These are not large, but the trade is hopeful that they mark the turning-point toward more active fall buying.

Hosiery and underwear manufacturers placed orders for both the 150s and the finer sizes, chiefly for spot shipment. The hosiery mills are more confident regarding the fall outlook and are reported to be increasing their output.

Weavers May Buy Soon

Rayon producers look for a good demand from the weavers about the end of the month. Rayon broadgoods sales picked up this week and prospects are for a continued movement which would necessitate increased output. Yarn stocks in the mills of the weavers are believed to be light and these factors will be obliged to buy shortly, it is believed.

The consuming trades are still uncertain regarding rayon yarn prices. The hesitancy is something more than the normal pause which follows a general price change, as it has certain aspects that are far from satisfactory. Certain hosiery manufacturers indicated this week that they were not convinced of the stability of yarn prices. These firms see the hosiery outlook improving and they plan to increase output of hose of all-rayon and part-rayon, but they are suspicious of what the rayon market will do and for that reason are hesitant about placing large orders for fall delivery. This is not a general situation, and it is the hope of the producers that the next few weeks will convince the consuming trades of the stability of present quotations.

There is much discussion among manufacturers as to the possibility of some method of guaranteeing rayon prices. This suggestion has followed each period of price uncertainty and it usually ended in smoke. The acute situation which obtained up to the most recent reduction, however, lent additional force to the guarantee proposition, and the sales executives of the producers report that the question is frequently raised by their customers. The producers themselves regard the idea with some doubt. It goes without saying that they would welcome any workable plan which would lift rayon out of its present uncertainty, and win back 100% consumer confidence, but so far no such plan has been evolved.

One healthy sign of the week is a let-up in the high-pressure call for inferior yarns. The new price levels of standard quality have made the latter more attractive to the weavers who previously had been using large quantities of inferior—and supposedly inferior—yarns. Producers find the competition between the standard and sub-standard yarns is less acute, and the sale of standard yarns is gaining proportionately. The growing indifference to inferiors has resulted in weakening prices at that end and there are frequent reports of the 80c. inferiors being sold at 70c. and under.

◆Rayon Waste Weaker; Prices Drop 2-3c.

THE rayon waste market continues soft, with prices even weaker than last week. A drop of 2 to 3c. has registered all along the line. Waste dealers now are selling with practically no profit margin, and are relying on a stronger fall market, to compensate for present losses. The one point in their favor is the steady reduction of surplus waste stocks. Waste imports have declined to a point of being negligible, and with the diminishing of domestic waste, the dealers are hopeful that a seller's market may develop in the fall, when demand registers its normal pick-up.

Buyers show little real interest and will place business only when special concessions are made. Dealers are more willing to cut prices than they were and some orders are being accepted at rock-bottom levels.

◆Cotton Wastes Sell in Sluggish Market

THE cotton waste market is doing a little business, but not much, and anything like normal merchandising profits seem out of the question at this time. This cannot become a permanent feature of this market, or of any market. The situation was summed up rather comprehensively by a dealer who remarked that a man could not afford to remain in the cotton waste market at this time unless he could afford to get along without the market.

There are no firm quotations, and prices are nominal all along the line. It is a very cautious market, both sellers and buyers moving warily. General dullness is the main feature of the market, and dealers able to do a little business find it almost impossible to maintain values as quoted a week ago. The best peeler comber can be bought at 10½c. and Egyptian comber at 10c. or below. Strips are relatively active, but only at the expense of values. Mills will pay around 9c. for peeler strips.

Wastes Wait on Cotton

Until cotton ceases to fall, wastes are not likely to go up, nor can it be expected that consumers will do any buying of importance until the cotton basis reaches some good measure of stability. With a vast amount of waste to be handled, the total aggregate sales even on the dullest of days would surprise those who do not know that the average waste production in the United States, excluding comber from the fine goods mills, is about 900,000 bales.

The thread section of the market is not over strong, some slasher and spooler being transferred at 7½c. and single white spooler at 8½c. with a larger demand seen around 8c.

Cotton Rallied Before Report

Buyers Are Restrained by Fear of Hedge Selling

CONTINUANCE of hot, dry weather over the greater part of the western and central belts, has been reflected by advances from the low levels reached at the close of the old crop season. The new October contract which had sold at 12.22 on July 31 advanced to 12.95 on Monday of this week, after which considerable irregularity developed owing to reports of showers in the Southwest and a possible breaking of the drouth. Showers, however, were considered insufficient to accomplish any real relief and the market stiffened up on bullish features in the weekly report of the Weather Bureau on Wednesday. Firmness of grain, no doubt, helped the tone of cotton as tending to attach increased seriousness to the drouth situation in the Mississippi Valley and West

The lighthouse that withstands the storms has a firm foundation

And—

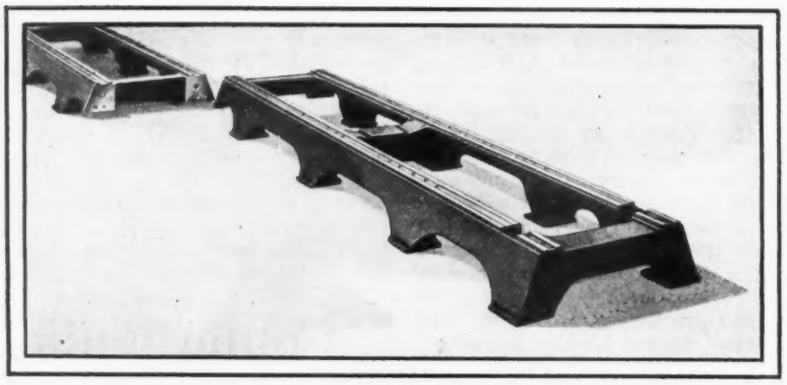
the Full-Fashioned machine that is practically vibrationless has an absolutely rigid cast foundation (weighing about 3,000 pounds for the legger base).

How about your next machines?

Write for further information.

Wildman Mfg. Co.
Full-Fashioned Division,
Norristown, Pa.

WILDMAN
THE WORLD'S STANDARD



WILDMAN

FULL FASHIONED HOSIERY MACHINE

Gulf States. No doubt a good part of the buying was attributable to covering in preparation for the Government report which was published on Friday.

The private reports which preceded the official statement had reflected considerable divergence of opinion as to the interpretation of condition figures, which naturally promoted uncertainty as to the probable showing of the Government report. There were, for instance, four private reports placing the condition at 66.4, while the accompanying crop indications ranged from 13,668,000 up to 15,004,000 bales. Evidently some authorities are making allowances for a less serious boll weevil threat than that of last season, while it is said that boll counts show up better than they did a year ago. There is confusion as to just what interpretation should be placed on the situation as to boll weevil and while the crops in the central and western belts have undoubtedly suffered from drouth, there is little doubt that the eastern belt has done very well and has better than average prospects for the most part.

Weather News No Stimulus

The unfavorable features in the weather news of July and early August have failed materially to stimulate speculative interest on the buying side. This seems to be restricted by doubt as to the absorption of the early new crop movement, and the hedging that is naturally expected against it at the prevailing level of prices. Cotton is beginning to move in a small way, but will soon be increasing quite rapidly.

World's spinners, according to all accounts, have bought little cotton for forward shipment as yet, and there must be a price that would bring them into the market in volume. Just what that price may be will depend upon further crop developments and the shaping up of the trade situation, but there has been so much and such general talk of ten-cent cotton that one is inclined to doubt whether it is realized. At least in speculative markets, during previous years, a thing almost universally expected has seldom been fully realized.

Secretary Hester's season-end statistics were about in line with expectations, placing the world's consumption of American lint cotton at 13,108,000 bales and the world's carry-over at 5,939,000 against 4,395,000 last year.

●

Boston.—Cotton futures were at the low point of the year during the week. Predictions regarding a major break in cotton, however, have not been fulfilled and stabilization when it occurs may not unlikely be on a higher rather than on a lower basis. Mills are holding large stocks of Egyptian and large stocks of Indian cotton.

Some of the New England mills are beginning to show interest in new crop commitments and during the week the extra staple cotton market has been a little more active in New Bedford. Prices are fairly stable at the present time and they are likely to remain so unless cotton should take another tumble, which some observers consider not likely in the near future. During the period July 26-Aug. 1 cotton made narrow price fluctuations with quotations Aug. 1 practically unchanged as compared with those of July 25. The average of the quotations for middling $\frac{7}{8}$ in., as compiled from reports of the 10 designated spot markets, reached the lowest point for the 1929-30 season on July 31, when it stood at 11.76c.

Indian cotton advanced during July in the face of a decline in American, says the current report of the New York Cotton Exchange Service, the price differences between competing varieties of the two staples narrowing sharply, particularly toward the end of the month. Indian cotton is now selling higher relative to American, than at any time since September, 1927. Demand for extra staple cotton continued fairly active but in very moderate volume.

Price cutting seems now to be chiefly confined to off grades. Current inquiry involves extra staples of medium length. There are comparatively few calls for staple longer than $1\frac{3}{16}$, but the offerings of longer fibered cotton have been very limited. One and $\frac{1}{8}$ in. and also $1\frac{5}{32}$ in. seem to have been the most needed types, and these were also the ones in most plentiful supply.

Memphis, Tenn., Aug. 4—The old cotton year was brought to a close with the dullest week of the season. Sales out of local stocks amounted to only 20 bales, but f.o.b. sales brought the total up to 1,888 bales. The carry-over here totaled 149,454 bales against 45,508 bales last year; stocks at compress points throughout the territory were correspondingly large. While most of the stock here is in the hands of merchants, large concerns as a rule, the unsold stock in hands of factors totaled 27,274 bales against 4,557 bales last year. A considerable part of the total stock is in the hands of Co-ops and the staple association.

The official quotation, basis on staples has not been changed in weeks, but not enough business is being done to test it. Sellers are a little firmer in their ideas as to basis, although so far this is reflected only in less willingness to make concessions in order to effect sales. Mill inquiry still centers on $1\frac{1}{8}$ to $1\frac{3}{32}$ in. medium and better and on low grades of approved type in small lots and comes mostly from southern mills.

The new crop movement in this territory seems likely to start early in September. Memphis has received its first new crop bale, but it was shipped in from southern Mississippi. All States in the cotton belt proper except North Carolina, Tennessee and Oklahoma have ginned first bales. Temperatures over the belt during the week were about seasonal normal to considerably above. Drouth conditions intensified over the northern two-thirds of the belt westward through Texas. The plant in dry areas is of good color but is undersized; early cotton is heavily fruited, but late cotton, of which the proportion is unusually large, is making poor progress.

Wool Out of Growers' Hands

Largest Domestic Clip and Smallest Imports for Years

Boston.

Progress is being made toward increased stabilization of prices, wool and noils leading the way. Recovered wools are steady, though short of business, light hoods and fine light merinos quoted lower. Wool rags are very quiet but the market is hopeful. Mill wastes constitute the weak spot in the raw material situation.

Dealers Are Hopeful

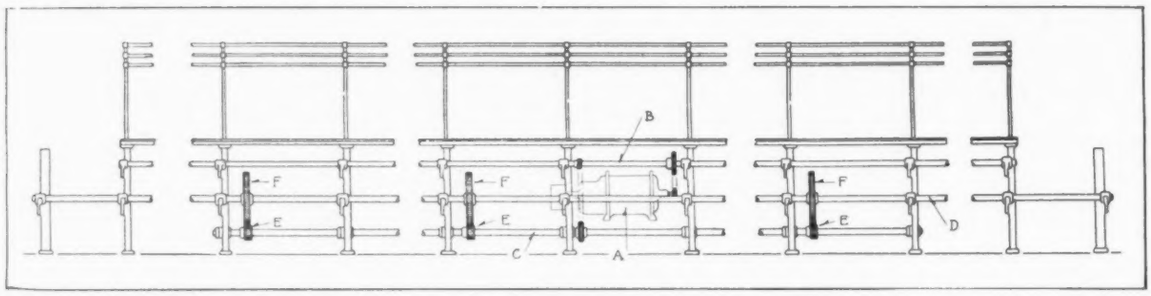
It is perhaps too early to state that the market has definitely started in an upward direction, but this may occur any time. Wool manufacturing in June made a gain of 3½% over May, and July is likely to show even larger expansion. The demand coming in at this time is distributed over the several grades, less confined to merino types than of late. No radical change, however, is anticipated either in wool demand or price adjustment.

The 1930 clip, the largest for several years, will doubtless all be wanted in due time, and, protected by the highest tariff ever enacted and handled in large part by the strongest organization that has yet appeared in the domestic wool field, this wool is not likely to be sold at a level precluding normal profits. The clip, estimated at 327,889,000 lb., is about 6% larger than a year ago, owing in part to an increase in the number of sheep shorn and in part to increase of 2.6% in average weight of the fleece. The increased weight of the fleece does not mean, of course, a similar increase in the weight of the wool that will be available, as 60% will be shrinkage.

What might be termed the "peak load" for wool in the Boston market is close to hand. For year to date Boston has received approximately 166,000,000 lb. of domestic wool as compared with 120,000,000 lb. in 1929 and 125,000,000 lb. in 1928.

Not for many years have wool imports been so low at point, approximately

A TYPICAL READING IMPROVEMENT



The above diagram shows the three-point gearing arrangement of the new Reading Central Drive. A = motor; B = handwheel shaft; C = torsion-taking driveshaft; D = cam shaft; E and F = pinion gears from intermediate shaft to cam shaft.

The Reading Three-Point Drive

A patented feature designed to distribute the driving force so as to offset torsional strains and the vibrations that accompany such strains in high-speed machines.

An *intermediate shaft* with three driving connections to short, rigid sections of the main shaft produces identical cam action in every section of the machine.

The resulting efficiencies of this new design are apparent—*no inherent vibration, better fabric, less attention or repairs, longer life.*

Textile Machine Works

Reading, Pa.

The "READING"
Full-Fashioned Knitting Machine

66,000,000 lb. behind those of a year ago, which was also a poor importing year. Something not so generally known is that cloth imports have exhibited a similar decline. For the first six months of 1929 the United States imported from Great Britain 4,414,000 square yards of woolen fabric while for the first six months of this year the import was 2,739,000 square yards. Imports of worsted fabrics declined from 3,267,000 square yards last year, to 2,239,000 square yards for the first six months of this year.

Demand for carpet wools is quiet, prices show an easier tendency both on spot materials and offerings from the primary market. Advices from the Marseilles market state that Oriental, Syrian and Turkish wools are moving at very low rates, about 10% below prewar prices in gold value, and that higher prices seem inevitable in the near future.

Recovered Wools

Quotations on recovered materials have been stable for a long period, and the only changes made recently have been in light hoods and fine light merinos. These rags have been selling at low prices and recovered wool manufacturers have been able to offer price reductions on the fully processed materials. The price on carbonized carded light hood is 31 to 33c. as compared with previous quotation of 34 to 36c. Fine light merinos carbonized and carded are quoted 31 to 33c. as compared with a previous quotation of 33 to 35c. One of the leading manufacturers has not found it necessary to revise prices downward on either white knits or white softs, the knit material fully processed now quoted 53 to 55c. and the white softs 50 to 53c.

The old rag situation is almost stationary. The movement downward in colored thread wastes looks like the possibility of sharper competition between these materials garnetted and the better class of colored knit stocks.

Noils Hold Firm

The noil market is holding steady. Mill demand is scattered and for small quantities but dealers are able to get the prices they ask on good materials. Imports since the passage of the tariff have been negligible, probably not more than 60 bales during that period into Boston. The statistical position, therefore, seems sound, and, in a case of choice noils from fine foreign wools, the supply is below normal and likely to be so for some time to come. Specialty noils are quiet but firm.

Wool Wastes Lower

The wool waste market for the last week or ten days has developed considerable weakness and the trend is in the direction of the low prices of the year. A leading house summed up the situation by saying, "It is a very quiet market, there is no demand for anything, orders received are quite small and a strong competition for the limited business available." All classes and grades of wastes are involved in the general weakness, even fine white drawing lap being quoted 5c. per lb. lower than at the beginning of the month.

Raw Silk Gaining Slowly

Prices Up 10c. But Buyers Still Doubt Stability

RAW silk continues its upward trend, with prices about 10c. above last week. The rise was accompanied by the usual set-backs but the current week finds the market somewhat stronger. The gain preceded the publication of the July consumption figures, and it was evident that the increase of 10,552 bales indicated in that report, had been discounted in advance. Total July consumption was put at 39,948. The total imports for July were 47,063 bales, a gain of about 15,000 bales.

Increased Confidence

New York importers noted an increased confidence among consuming industries. Broadsilk weavers had allowed their stocks to shrink to insignificant proportions and were obliged to buy, for the first part at least, of their fall production. The broadsilk situation is improving slowly but steadily and mills are less hesitant about raw silk commitments.

Hosiery knitters also are more disposed to buy, but here too there is some hesitancy. Manufacturers are not thoroughly convinced that silk will not suffer a relapse, but each week appears to be winning them to greater confidence.

High Grade 20/22s Scarce

High grade raw silk is reported scarce in certain numbers, notably white 20/22s; importers say they have difficulty in making spot shipment of certain of these grades. Importers are holding to their policy of not buying for stock, and most of the yellow 20/22s imported in July were contracted for prior to shipment.

There is no change at the Japanese end, so far as the warehoused surplus stocks are concerned. The 109,717 bales under control of the Japanese government represents the bulk of the 143,520 bales of surplus now being held in Yokohama and Kobe.

1931 Bathing-Suits Cheaper?

Price Cut and Quality Expected To Feature New Offerings

INTEREST in knitted outerwear this week centers on the plans of the mills for their 1931 bathing-suit openings, the first of which are expected to take place about Aug. 15. Producers held to their usual secrecy regarding price-lists, but it is understood that there will be a downward revision on all lines. This reduction, together with increased emphasis on quality, and a concerted trade-up drive in the industry, comprise the chief features of the new bathing-suit season as revealed to date.

Producers are very confident regarding the 1931 prospects. Sales during the season just closed indicate a consumer trend toward quality suits; it was frequently noted by mills offering both low and medium-priced apparel, that the medium-priced suits would sell faster than those less expensive. Another element which the trade is taking into consideration in preparing the new lines, is the increased discrimination in the part of the consumer.

Appliques Important

The new bathing-suit lines are expected to stress appliques. Colors in women's suits will be bright but less sporty than this year; designers are aiming at harmonies and contrasts which offer smart compositions, without being "jazzy." Darker colors will be more important than hitherto for women's suits, it is intimated, because of the preference shown by women this year for mannish models.

Heavyweight sweaters are moving more steadily, but sales are still backward. Buying is spotty, some mills reporting a very active call, for end-August delivery. The general tone of the outerwear market is better.

◆See Gain in Hosiery Tone

THE hosiery market is making headway slowly; buying is still hesitant, but prices are firmer, and there is a noticeable trend toward buying on a quality rather than on a price basis. It is learned that several important mills, usually very conservative in their policies, are planning to manufacture for stock. These companies see the hosiery market as nearing a turning-point and look for a spirited pick-up in consumer

Smart sport and beach coats *entirely seamed on one Union Special—*

All of the major seams on these garments were stitched on a Style 35800 AZ Union Special machine, even to sewing on the cuffs as shown on the sport coat. "Thirty-Five-Eight" feed-off-the-arm machines are especially adaptable to seaming operations on the medium weight flannels used in the manufacture of these popular sport coats.

The Union Special Class 35800 felling machines make the double or triple stitch felled seam. Light work is performed just as perfectly as for heavy materials, without puckering or drawing of the seams.

Samples of work and data on the remarkable production records being made on Union Special feed-off-the-arm felling machines will be sent on request.

» » »

UNION SPECIAL MACHINE COMPANY

400 North Franklin Street • Chicago, Ill.

TWS-9Gray

demand in early fall. All of the mills referred to, make half-hose exclusively and their ranges run from low to high priced goods.

Rayon Half-Hose Slow

Worth Street representatives of mills specializing in rayon hosiery, both half-hose and full length women's goods, are having difficulty in moving their low-priced lines. This is especially true of half-hose. The recent price cut has failed to stimulate demand to any extent. Jobbers and retailers are placing small orders for half-hose to retail at 20c. and 25c., but there is not much new business available.

There is discussion in the market as to the possibility of a half-hose shortage later in the year. The hectic situation of the spring months resulted in drastic curtailment by a portion of the trade, and some factors now believe that if orders take their normal rise in fall, jobbers and retailers will find difficulty in getting spot delivery. The distributors are understood to be short of half-hose made to retail at 50c. and up. The continued price-cutting brought quick clearance of accumulated stocks.

◆Low-Priced Winter Underwear Moving

UNDERWEAR tone has improved slightly all along the line and especially at the heavyweight end. Producers of low-priced winter weights have felt the market depression less than any other group; as in other divisions of textiles, the economy trend has had a more marked effect on the higher-priced heavyweights. The mills specializing in union suits made to retail at 69c. to 98c., are in a satisfactory position, for the most part.

Buying began somewhat later than usual, but the last two months have been steady, and now these mills are enjoying a good turnover. Indications are that sales may equal those of the same period in 1929.

Higher-Price Lines Backward

Higher-priced heavyweights also have improved, but the season is still backward. Producers frankly were skeptical of the prospects of a shortage, but they expect a spirited demand from now on. Some of the larger mills are delivering at high pressure. The tone of the market is more confident at this end, though there is little chance that August-to-October business will make up for the business lost at the start of the season.

Lightweights are steady. There is considerable reordering of cotton athletic shirts and shorts, both in the low- and medium-price fields. Rayons are active; the recent cut in rayon underwear prices, which following the yarn reduction, caused a temporary hesitancy, but buyers have begun placing business once more.

Broadsilk Call Stronger

Cutters, Retailers Show Interest in Plain Cantons

BROADSILK demand is stronger, and there is considerable activity in the New York market; both cutters and piece goods buyers are placing business, but the latter are more confident. Cutters are unusually cautious in their commitments, and are restricting their orders to minimum immediate requirements. The hesitancy of this group is ascribed to uncertainty regarding raw silk; the cutters are afraid to buy ahead on yardage, for fear that silk will drop again and nip them. If silk should continue a steady advance for a few weeks or even if it held its present levels, the cutters probably would be more favorably disposed toward futures.

The bulk of current orders is being placed by retailers and these buyers are emphasizing plain cantons. The piece goods buyers are doing much "shopping" in the New York district; orders are not as numerous or as big as the trade would like, but they mark an increase over the last few weeks.

Call for Heavier Weights

Silk-and-wool tweeds and other heavy weights are being sought, and the mills specializing in these lines are placing considerable business. In the lightweight class, rayons are daily growing more important. Current rayon broadgoods offerings are unusually attractive and the trade looks for a spirited demand at this end around Labor Day.

Satins are picking up slowly. It is still early for the formal fabrics, but retailers and cutters both show interest. Real buying of these lines is not expected to develop before Sept. 5.

Demand at present centers on yardage selling at $1.15 to $1.25, and retailing at $1.95.

◆Wool Goods Demand Sluggish

ALL sections of the wool goods market are extremely quiet. Women's wear houses are slightly more active than men's wear mills, but even this end is spotty and sellers characterize it as lacking snap. Orders have come in spurts of a day or so, but there has been no sustained demand.

Certain factors stated that a fair amount of fall business has been placed on tweeds lately, mostly of the monotone type of goods. Many centers have had a good business on crepe and tricot broadcloths, and it is expected that these same fabrics will become important later in the season. It is generally believed that the coming season will high-light dress coat materials rather than fancy goods.

One mill man pointed out that the present fashions in women's coats is almost certain to cause garment purchasing within the next six months. That is unless a woman is willing to wear a coat that definitely classes itself as "out of style." Retailers, however, seem to be indifferent to this possibility, and are not taking any steps to meet the probable demand. By the time the demand is apparent in retail channels, it will be too late to buy goods and have garments made in time to catch the trend.

◆Percales Priced on Low Basis

THE outstanding development in the cotton goods market was the naming of a 14½c. price on 80-square percales. Various reasons are given for this move, but boiled down and stripped of flowers they all amount to the same thing—keen competition for available business. There has been underselling and inside price cutting, and it is hoped that this will be prevented by the lowering of the price to an "uncuttable" level. Also it is hoped that these low prices will spur consumption, as it will enable retailers to offer this fabric at 19 to 22c., where they have been charging 25c. per yd.

Whether these objectives will be obtained or not is debatable. To date, the new prices have not been in effect long enough to obtain definite information, but many are skeptical of the ultimate results. Theoretically, lower prices should speed up purchasing, but, as a recent example, certain denim manufacturers have stated that they could have sold as much goods at 13c. as they have at 12½c.

Gray Goods Waiting

Gray goods trading was held up, principally because of the approaching Government cotton report on Aug. 8. Cotton is one of the ruling factors at present, and the interpretation placed on the August report is likely to govern trading in the near future. The staple has shown some recovery due to drouth conditions, but few expect materially higher cotton.

Sluggishness in gray goods caused a further decline in print cloth prices late last week. The 64x60, 5.35 yd. declined to 5¼c. in several centers, although there were mills unwilling to consider bids at this quotation. When this price was first made, interest picked up somewhat and some fair size orders were taken.

QUOTATIONS

at close of business, Aug. 6, 1930
Prices cover average qualities unless otherwise stated

Cotton Goods

	Aug. 6	July 30	Aug. 7 1929
PRINT CLOTHS			
27 -in., 64x60, 7.60	4½c.	4½-4¼c.	5½c.
38½-in., 64x60, 5.35	5½-5¾c.	5¾-5¾c.	7½c.
39 -in., 68x72, 4.75	6-6¼c.	6¼-6¼c.	8½c.
39 -in., 72x76, 4.25	7-7¼c.	7¼-7¼c.	9½c.
39 -in., 80x80, 4.00	7½-7¾c.	7¾-7¾c.	10¾-10¾c.
BROWN SHEETING			
36-in., 56x60, 4.00	6½-6¾c.	6¾-7 c.	8½c.
36-in., 48x48, 3.00	7¾- 8c.	8-8½c.	10½c.
37-in., 48x48, 4.00	6 -6¼c.	6¼-6¼c.	8 c.
PAJAMA CHECKS			
36½-in., 72x80, 4.70	6¼-6½c.	6¼-6½c.	9 c.
36½-in., 64x60, 5.75	5¼c.	5¼c.	7¼c.
MISCELLANEOUS			
Drills, 37-in., 3 yd	8¼c.	8¼c.	10¼c.
Denims, 2.20	12¼c.	12¼c.	17c.
Tickings, 8 oz	17½-17¾c.	17½-17¾c.	22-23½c.
Standard prints	8 c.	8 c.	9 c.
Eastern staple ginghams, 27-in	10c.	10c.	10½c.

Cotton Waste

Peeler comber	10½—11
Peeler strips	9½—10
Sak. comber	10 —10½
Choice willowed fly	5 — 6
Choice willowed picker	4 — 5
Sak. strips	12 —13
Linters (mill run)	3 — 3½
White spooler (single)	8 — 8½

Cotton Yarn

(Carded yarn quotations are nominal)

CARDED (Average Quality)

Double Carded 2c.-4c. higher, according to quality

SINGLE SKEINS OR TUBES (Warp Twist)

4s to 8s	$0.21½-.22	20s	$0.24
10s	.22 -.22½	24s	-.26½
12s	.22½-.23	26s	-.27½
14s	.23 -.23½	30s	.29 -.29½
16s	.23½-.24	40s ex. qual.	.41 -.42

TWO-PLY SKEINS AND TUBES

8s-2	$0.22 -.22½	26s-2	$0.27½- 28
10s-2	.22½-.23	30s-2	-.29½
12s-2	.23 -.23½	36s-2	.35 -.36
14s-2	.23½-.24	40s-2	.37 -.38
16s-2	.24½	40s-2 hi blk	.41 -.42
20s-2	.24 -.24½	50s-2	.46 -.47
24s-2	.26½-.27	60s-2	.54 -.55

SINGLE WARP

10s	$0.22 -.22½	24s	$0.26 -.26½
12s	.22½-.23	26s	.27 -.27½
14s	.23 -.23½	30s	.29½-.30
16s	-.23½	40s ex. qual.	-.42
20s	-.24½		

TWO-PLY WARPS

8s-2	$0.22½	24s-2	$0.27
10s-2	.22½-.23	26s-2	-.28
12s-2	-.23½	30s-2	.29 -.29½
14s-2	-.24	40s-2 ordin.	.37 -.38
16s-2	-.24½	50s-2	-.47
20s-2	.24 -.24½	60s-2	-.55

8s-3 and 4-ply skeins and tubes; tinged, 19-20; white, 22-23; waste 18-18½

HOSIERY CONES (Frame Spun)

8s	$0.22½	22s	$0.26½
10s	-.23	24s	-.27½
12s	-.23½	26s	-.28½
14s	-.24	30s tying	-.30
16s	-.24½	30s reg	-.31½
18s	-.25	30s ex. qual.	-.34
20s	-.25½	40s	.38 -.39

COMBED PEELER—(Average Quality)

TWO-PLY—(Knitting Twist) Cones

20s-2	$0.40 -.42	60s-2	$0.60
30s-2	.45 -.45½	70s-2	.70
36s-2	.46 -.47	80s-2	.81 - .82
40s-2	.47 -.48	90s-2	-1.00
50s-2	.52 -.53	100s-2	1.20 -1.25

WARPS, SKEINS AND CONES

TWO-PLY—(Warp Twist)

20s-2	$0.41 -.42	60s-2	$0.60 - .61
30s-2	.45 -.46	70s-2	.70 - .71
36s-2	.46 -.47	80s-2	- .82
40s-2	.47 -.48	90s-2	1.05 1.10
50s-2	.53 -.54	100s-2	1.20 -1.25

SINGLES

12s	$0.34	30s	$0.43½-.44½
14s	-.34½	38s	.46 -.46½
16s	-.35	40s	.47½-.48
18s	-.35½	50s	-.52
20s	-.36½	60s	.59 -.60
24s	-.39	70s	.69 -.70
28s	-.42	80s	.80 -.81

MERCERIZED CONES—(Combed, Ungassed)

26s-2	$0.55 -.56	90s-2	$1.35 -1.37
30s-2	.57 -.58	100s-2	1.65 -1.67
36s-2	.60 -.61	120s-2	2.05 -2.08
40s-2	.63 -.64	30s	- .75
45s-2	.65 -.67	40s	- .80
50s-2	.67 -.69	50s	- .85
60s-2	.76 -.78	60s	- .90
70s-2	.88 -.90	70s	-1.05
80s-2	1.00 -1.05	80s	-1.25

Cotton Prices and Statistics

COTTON STATISTICAL DATA

(Fluctuations of Futures)

	Closed July 31	For Week High	For Week Low	Closed Aug. 6	Net Change
August	12.32	12.87	12.32	12.74	+.42
September	12.46	13.01	12.46	12.88	+.42
October	12.60	13.17	12.46	13.02	+.42
November	12.68	13.23	12.68	13.10	+.42
December	12.78	13.35	12.70	13.18	+.40
January	12.84	13.33	12.74	13.24	+.40
February	12.71	13.27	12.71	13.12	+.41
March	12.83	13.38	12.72	13.20	+.37
April	12.91	13.44	12.91	13.27	+.36
May	12.99	13.50	12.88	13.35	+.36
June	.....	13.55	13.25	13.43	.....
July	.....	13.60	13.15	13.51	.....

SPOT FLUCTUATIONS FOR WEEK

(Middling)

	New York	New Orleans	Liverpool
Friday, Aug. 1	12.80	12.42	7.22
Saturday, Aug. 2	12.85	12.42	Holiday
Monday, Aug. 4	13.10	12.72	Holiday
Tuesday, Aug. 5	12.85	12.49	7.44
Wednesday, Aug. 6	12.95	12.60	7.29
Thursday, Aug. 7	13.15	12.80	7.50

SPOT FLUCTUATIONS AND STOCKS

Markets	July 30	Aug. 6	Sales	Stocks This Week	Stocks Last Year
Galveston	12.15	12.60	469	184,210	74,089
New Orleans	12.30	12.60	898	318,813	44,523
Mobile	12.00	12.20	.....	9,169	11,430
Savannah	11.69	12.13	155	103,599	19,175
Norfolk	12.56	12.94	700	48,070	25,976
New York	12.45	12.95	.....	238,743	135,789
Augusta	12.13	12.50	209	46,648	30,498
Memphis	11.60	12.00	2,150	144,728	42,481
St. Louis	11.75	11.75	.....	7,336	6,818
Houston	12.10	12.55	8,914	513,499	134,716
Dallas	11.60	12.05	9,489	10,502	2,404

BASIS MIDDLING

	Saturday, Aug. 2	Saturday, July 26
10 markets average	12.15	12.30
Memphis	11.90	12.00

PREMIUM STAPLES

First Sales from Factors Tables at Memphis

Grade Strict Middling	Prices Nominal
1⅛-in	14.65- 14.90c.
1 3/16-in	15.85- 16.15c.
1¼-in	21.00- 21.25c.

CURRENT SALES

	For Week	Prev. Week	Week Before
Memphis total	1,888	2,903	2,806
F.o.b. included in total	1,868	2,653	2,347
10 markets	17,185	11,030	10,781

MEMPHIS RECEIPTS, SHIPMENTS, ETC.

	For Week	Last Year	Year Before
Net receipts	1,165	770	1,055
Gross receipts	6,488	7,356	6,303
Total since Aug. 1, net	119	189	342
Shipments	11,293	12,580	9,133
Total since Aug. 1	966	6,359	8,223
Total stock	148,957	43,903	75,569
Decrease for week	4,715	8,986	8,380
Unsold stock in hands of Memphis factors	27,274	4,557	.....
Decrease for week	1,119	236	.....

AVERAGE PRICE AUG.-SEPT. SHIPMENT HARD WESTERN COTTON

	F. o. b. New England Middling	St. Middling
1 1/16 in	15 -15½c.	15½-15¾c.
1⅛ in	16 -16½c.	16½-17 c.
1 3/16 in	18 -18½c.	19 -19½c.
1¼ in	21½-23 c.	23½-25 c.

Basis on New York, New December, 12.97.

DIFFERENCES ON AND OFF MIDDLING

WHITE GRADES

	Dallas	Memphis	Montgomery	Augusta	Average
M. F	1.05†	1.00†	1.00†	1.00†	1.00†
S. G. M	.90†	.85†	.90†	.88†	.86†
G. M	.75†	.75†	.75†	.75†	.72†
S. M	.50†	.50†	.50†	.50†	.50†
S. L. M	.75*	.65*	.65*	.75*	.71*
L. M	1.75*	1.75*	1.50*	2.00*	1.73*
S. G. O.**	3.00*	2.75*	2.50*	3.25*	2.88*
G. O	3.00*	2.75*	2.50*	3.25*	3.93*

YELLOW TINGED

G. M	.50*	.25*	.50*	.50*	.55*
S. M	1.00*	.75*	1.00*	1.00*	1.05*
M.**	1.75*	1.25*	1.50*	1.50*	1.65*
S. L. M	2.50*	1.75*	2.25*	2.25*	2.32*
L. M.**	3.50*	2.25*	3.00*	3.00*	3.22*

YELLOW STAINED

G. M	1.50*	1.75*	1.50*	1.50*	1.55*
S. M.**	2.25*	2.50*	2.50*	2.50*	2.40*
M.**	3.00*	3.00*	3.50*	3.50*	3.20

BLUE STAINED

M. G.**	1.75*	1.50*	1.75*	1.75*	1.70*
S. M.**	2.25*	2.25*	2.75*	2.75*	2.45*
M.**	3.00*	2.75*	3.75*	3.75*	3.23*

**Grades not deliverable on contract. †On Middling *Off Middling.

EGYPTIAN COTTON

Alexandria Exchange, Aug. 6		Change
November Sak	22.69	—0.58
October uppers	15.40	+0.32

AUG.-SEPT. SHIPMENT c. i. f. BOSTON

(Tariff not included)	(Prices Nominal)
Fully good fair Sak	30.25
Fully good fair to good Uppers	18.50

(By Anderson, Clayton & Co.)

Wool

OHIO, PENNSYLVANIA AND WEST VIRGINIA
(IN GREASE)

Fine delne..	$0.30 –$0.31	¾ blood.....	$0.29 –$0.30
Fine clthg..	.23 – .24	½ blood.....	.30 – .31
¼ blood.....	.29 – .30		

TEXAS AND CALIFORNIA
(CLEAN BASIS)

Texas, 12 months	$0.73 –$0.75
California, Northern	.65 – .68

PULLED—EASTERN (CLEAN BASIS)

AA	$0.77 –$0.80	B-Super	$0.58 –$0.62
A-Super	.65 – .68	C-Super	.55 – .58

MONTANA, IDAHO AND WYOMING
(CLEAN BASIS)

Staple fine	$0.75 –$0.78
Staple ¾ bld.	.70 – .73
Fine and fine medium	.70 – .72
¾ blood	.60 – .63
½ blood	.57 – .60

MOHAIR—DOMESTIC

Best Carding	$0.38 –$0.40
Best combing	.53 – .55

MOHAIR FOREIGN (IN BOND)

Turkey fair, average	$0.28 –$0.30
Cape firsts	.28 – .30

FOREIGN CLOTHING AND COMBING
(CLEAN BASIS IN BOND)

Australia:	
70s	$0.65 –$0.70
64s	.53 – .55
58s-60s	.46 – .48

(IN GREASE)

Montevideo:	
58-60s	$0.25 –$0.26
56s	.25 – .26
50s	.23 – .24
Buenos Aires:	
4s, 40-44s	$0.22 –$0.23
5s, 36-40s	.20 – .21

FOREIGN CARPET (GREASE BASIS IN BOND)
SCOURED

Aleppo	$0.30 –$0.31
China: Combing No. 1	.16 – .17
China Filling Fleece	.14 – .15
Szechuen ass't	.15
Cordova	.15 – .16
Scotch black face	.20 – .21
East India: Kandahar	.23 – .24
Vican'r	.27 – .28
Joria	.27 – 29

Worsted Yarns

ENGLISH SYSTEM WEAVING

2-20s, 36s	$0.92½–$0.95
2-24s, 40s	1.02½– 1.05
2-26s, 44s	1.10 – 1.12½
2-28s, 46s	1.15 – 1.17½
2-30s, 48s	1.20 – 1.22½
2-32s, 50s	1.25 – 1.27½

(Single yarns 5c. less than above)

2-36s, 58s	$1.35 –$1.40
2-40s, 60s	1.45 – 1.47½
2-40s, 64s	1.50 – 1.52½
2-50s, 66s	1.70 – 1.75
2-60s, 70s	2.15 – 2.20

ENGLISH SYSTEM KNITTING

2-20s, 44s in oil	$0.95
2-20s, 48s in oil	1.02½
2-20s, 50s in oil	$1.05 – 1.07½
2-20s, 56s in oil	1.12½– 1.15
2-20s, 60s in oil	1.30 – 1.32½
2-20s, 64s in oil	1.37½ 1.40
1-15s, 46s dyed	1.15 – 1.17½
1-15s, 48s dyed	1.17½– 1.20
1-15s, 50s dyed	1.22½

(Oil yarns 17½c. less)

FRENCH SYSTEM

1-20s, 58s	$1.20 –$1.22½
1-20s, 60s	1.25 – 1.27½
1-18s, 64s, Dyed	1.52½– 1.55
1-26s, 64s	1.27½– 1.30
1-30s, 60s, Warp	1.42½– 1.45
1-30s, 64s, Warp	1.47½– 1.52½
2-30s, 64s, Fancy mixes	1.70 – 1.72½
2-40s, 64s, Zephyrs	1.62½– 1.65
1-50s, 66s	1.62½– 1.65
2-50s, 66s	1.80 – 1.82½
1-60s, 70s	1.95 – 2.00
2-60s, 70s	2.10 – 2.15

FRENCH SPUN MERINO WHITE

1-30s, 50-50-58s on cops	$1.05 –$1.07½
1-40s, 50-50-60s on cops	1.20 – 1.25
1-40s, 50-50-64s on cops	1.22½– 1.25
1-40s, 50-50-64s Australian cops	1.30 – 1.35

Underwear mixes, 3c. additional.
Solid color, 35c. additional.

◆

Tops and Noils

TOPS—BOSTON

Fine (64-66s)	$0.97 –$0.99
Half-blood (60-62s)	.88 – .92
High ¾ blood (58s)	.83 – .85
Aver. ¾ blood (56s)	.80 – .83
Low ¾ blood	.73 – .78
High ½ blood (50s)	.70 – .72
46s S. A. and N. Z.	.65 – .66
44s S. A and N. Z.	.62 – .65
40s S. A and N. Z.	.58 – .60

TOPS—BRADFORD, ENG. (JULY 31)

Fine (70s)	31½d	¾ bld. (56s)	20½d
Fine (64s)	28 d	½ bld. (50s)	17 d
¾ bld. (60s)	26 d	Cross-bred (46s)	15½d
½ bld. low (58s)	22½d		

NOILS—BOSTON

Fine	$0.57–$0.60	High ¾ bld.	$0.44–$0.47
Half-bld.	.53– .55	Low noils	.40– .42
Aver. ¾ bld.	.45– .48	Medium colored	.40– .42
Fine colored	.46– .48		

Wool Substitutes

WOOL WASTE

Lap, fine white	$0.80 –$0.83
Lap, fine colored	.58 – .60
Hard ends, fine white	.60 – .63
Hard ends, ¾ blood white	.40 – .43
Hard ends, fine colored	.28 – .30
Hard ends, medium colored	.23 – .25
Card, fine White	.30 – .33
Burr, fine Carbonizing	.38 – .40

OLD WOOLEN RAGS (GRADED FOR MFRS.)

Merinos, Coarse Light	$0.06 –$0.07
Merinos, Fine Dark	.04½– .05
Merinos, Fine Light	.14 – .14½
Serges, Blue	.07½– .08
Serges, Black	.07 – .08
Serges, Red	.11 – .11½
Knit, White	.29 – .30
Knit, Red	.15 – .16
Knit, Light Hoods	.14 – .15
Worsted, Light	.05½– .06
Worsted, Blue	.07½– .08
Worsted, Black	.07½– .08

Silk Yarns

THROWN SILK (60 day basis)

	Nominal
Japan organzine, 2 thd. grand XX in skeins	$4.40
Japan organzine, 2 thd. sp. crack in skeins	4.25
Japan crepe, 3 thd. grand XX in bobbins	4.60
Japan crepe, 3 thd. sp. crack on bobbins	4.30
Japan crepe, 4 thd. crack on bobbins	4.05
Canton crepe, 3 & 4 thd. ns. 14/16 on bobbins	2.70
Tussah tram, 2 end on cops	2.00
Hosiery tram, 3 thd. Japan XXX	4.95
Hosiery tram, 4 thd. Japan, selec. gd. XX	4.45
Hosiery tram, sp. crack XX	3.70
Hosiery tram, crack XX	3.60
Hosiery tram, XX	3.35

SPUN SILK YARNS—(Terms: net 30)

40/2	$3.65	60/2	$4.00
50/2	3.85	62/1	2.80

Raw Silk

(60 day basis)
Prices Nominal

	13/15 White	20/22 White	20/22 Yellow
Super Grand, 86/88%	$3.90	$3.10	$3.00
Special Grand, 85%	3.70	3.00	2.90
Grand XX, 83%	3.40	2.90	2.80
Special Crack, 81%	3.20	2.80	2.75
Crack XX, 78%	3.05	2.75	2.70
Extra Extra, 73%	3.00	2.70	2.65
Best Extra, 68%	2.90	....	....

Canton filature, new style, 141/6	$1.90
Canton filature, new style, 20/22	1.85
Tussah filature, 8 cocoon	1.55

NATIONAL RAW SILK EXCHANGE

	Close July 30	For the Week High	For the Week Low	Close Aug. 5	Net Chge.
August	2.74	2.81	2.70	2.78	+.04
September	2.71	2.80	2.69	2.78	+.07
October	2.71	2.80	2.69	2.78	+.07
November	2.71	2.80	2.69	2.79	+.07
December	2.71	2.80	2.70	2.78	+.07
January	2.71	2.80	2.70	2.78	+.07
February	2.70	2.80	2.70	2.78	+.08
March	2.71	2.80	2.70	2.80	+.09

July 30 to Aug. 5—Total contracts, 604. Total number of bales, 6,040. Total approximate value, $2,114,000.

Domestic Rayon

VISCOSE PROCESS

Denier	Filament	First	Second
50	14	$2.15	$1.95
75	18	1.60	1.50
75	30	1.70	1.60
100	18	1.25	1.15
100	40	1.30	1.20
125	36–50	1.20	1.10
150	24–30	.95	.90
150	36–40	1.00	.95
150	60	1.15	1.10
150	75–90	1.20	1.15
170	24–27	.95	.90
170	60	1.15	1.10
200	30	.90	.85
200	35–40	.90	.85
200	75–80	1.10	1.05
300	44–60	.78	.75
450	54–60	.78	.75
600	72–96	.78	.75
900	100–144	.78	.75

NITRO-CELLULOSE PROCESS

Denier	First Qual.	Second Qual.	Denier	First Qual.	Second Qual.
75	1.60	1.50	150	.95	.90
100	1.25	1.15	175	.95	.90
125	$1.20	$1.10			

CUPRAMMONIUM PROCESS

Denier	Filament	Price	Denier	Filament	Price
15	25	$3.10	40	30	$2.40
25	25	2.85	52	30	2.20
30	25	2.60			

(Due to diversified offerings prices for higher denier are not listed here.)

ACETATE PROCESS

Denier	Price	Denier	Price
45	$2.75	120	$1.90
55	2.55	150	1.60–1.85
75	2.25–2.70	200	1.55
100	2.00–2.45	300	1.50

Rayon Waste

Prices Nominal

Open bleached waste	–$0.16
Open unbleached waste	–.15
Bleached thread waste (mfs.)	– .14
Bleached thread waste (misc.)	.10– .12
Colored thread waste	.06– .08
Colored clips	–.06

CONVERTED RAYON WASTE

Bleached tops	–$0.44
Unbleached tops	–.35
Bleached noils	–.13
Bleached garnets	–.13
Unbleached garnets	–.13
Colored garnets	–.10

Silk Waste

Kibizzo Kikai Grand XX	$0.85
Kibizzo Kikai Triple Extra	.92
Frison Grand Double	.90
Pierced Cocoons	1.12

Accident or Design...

this sensational comeback of cotton?

THIS new popularity of cotton is no accident. It came about through a definite plan by manufacturers and style authorities to put cottons into the class of highly styled fabrics. Such agencies as the Cotton-Textile Institute have contributed much to the success of the movement.

Trademarking to the Fore

Manufacturers have gone further than merely giving their cottons authentic style and sound quality. They are employing modern, scientific merchandising methods. They are initiating attractive, sales-compelling advertising. And to make their merchandising and advertising plans doubly effective, they are marking the fabrics with name or trademark.

If you were to ask any cotton goods man who trademarks his fabrics what benefits it gives him, you would get this answer: 1. It protects his cottons from substitution. 2. It establishes the quality of his cottons in the eyes of the buyer. 3. It helps create a steady demand . . . encourages repeat sales . . . multiplies the effectiveness of his advertising campaign.

But . . . how to Trademark?

For 27 years Kaumagraph has been identification and trademarking headquarters for the cotton industry. Today more than ever before Kaumagraph is prepared to assist manufacturers to apply trademark to fabric . . . with Kaumagraph Dry Transfers, now available in both one and two colors.

Special mechanical appliances, worked out by Kaumagraph, simplify the trademarking operation. Often it is possible to combine it with another operation such as measuring, rolling, winding, etc., so that the handling expense is not increased. It is not unusual for Kaumagraph to design special machinery for unusual trademarking requirements.

Ask for further particulars by mail . . . or we will be glad to send a representative to give you additional information.

KAUMAGRAPH COMPANY
200 Varick Street New York City

Boston • Chicago • Philadelphia
Los Angeles • Chattanooga, Tenn.
Charlotte, N. C. • Paris, Ontario
Paris, France • Manchester, Eng.

Southern Mill Securities

(A. M. Law & Co., Spartanburg)

	Bid	Asked
Abbeville Cotton Mills	..	50
Anderson Cotton Mills	69	73
Arcade Cotton Mills	..	60
Arcadia Mills	..	240
Arcadia Mills, pfd.	96	100
Arkwright Mills	..	50
Augusta Factory, Ga.	..	20
Avondale Mills, Ala.	750	1000
Beaumont Mfg. Co.	250	300
Beaumont Mfg. Co. 7% pfd.	100	102
Belton Mills	..	25
Belton Mills, pfd.	..	75
Bibb Mfg. Co.	98	101
Bibb Mfg. Co. 6% pfd.	99	102
Brandon Corp., A	..	45
Brandon Corp., B	..	7
Brandon Corp., pfd.	80	85
Calhoun Mills	88	95
Chadwick-Hoskins Co. (par, $25)	9	12
Cheanee Mills	..	60
Chiquola Mfg. Co.	250	260
Chiquola Mfg. Co., pfd.	88	92
Clifton Mfg. Co.	95	98
Clinton Cotton Mills	225	250
Columbus Mfg. Co., Ga.	80	90
Cowpens Mills	..	30
D. E. Converse Co.	90	95
Dallas Mfg. Co., Ala.	..	65
Darlington Mfg. Co.	40	50
Drayton Mills	110	..
Dunean Mills	120	125
Dunean Mills, pfd.	100	102
Eagle & Phenix Mills, Ga.	..	65
Easley Cotton Mills, pfd.	..	47
Enterprise Mfg. Co., Ga.	..	100
Fairforest Finishing Co., serial notes	98	100
Florence Mills	45	50
Florence Mills, pfd.	98	102
Gaffney Mfg. Co.	..	25
Gainesville Cotton Mills, Ga.	145	155
Glenwood Mills	85	95
Gluck Mills	65	75
Gossett Mills	..	63
Graniteville Mfg. Co.	..	100
Greenwood Cotton Mills	400	..
Grendel Mills, pfd. (par, $50)	45	48
Hamrick Mills	..	100
Hartsville Cotton Mills	130	140
Hunter Mfg. & Com. Co., pfd.	84	87
Industrial Cotton Mills Co., pfd.	..	30
Inman Mills	115	125
Inman Mills, pfd.	100	..
Judson Mills, A, pfd.	97	100
Judson Mills, B, pfd.	95	98
King, John P. Mfg. Co., Ga.	80	90
Lancaster Cotton Mills	250	270
Laurens Cotton Mills	..	120
Limestone Cotton Mills	..	100
Lydia Cotton Mills, serial notes	99	101
Marion Mfg. Co., N. C.	..	113
Marlboro Mills	..	15
Mills Mill, pfd.	95	99
Mollohon Mfg. Co., pfd.	97	100
Monarch Mills	110	115
Musgrove Cotton Mills	30	35
Newberry Cotton Mills	100	105
Ninety-Six Mills	400	..
Norris Cotton Mills	..	40
Orr Cotton Mills	..	60
Orr Cotton Mills, pfd.	..	83
Pacolet Mfg. Co.	..	140
Pacolet Mfg. Co., pfd.	95	100
Panola Cotton Mills, Class A, pfd. (par, $60)	55	60
Pickens Cotton Mills	105	115
Piedmont Mfg. Co.	96	100
Piedmont Print Works (no par)	15	20
Piedmont Print Works, pfd.	60	70
Poe, F. W. Mfg. Co.	24	29
Riverside & Dan River Mills	9¾	11
Riverside & Dan River Mills, 6% pfd	73	78
Saxon Mills	..	70
Sibley Mfg. Co., Ga.	50	60
Southern Bleachery	16	20
Southern Bleachery, Pfd.	80	85
Southern Bleachery, serial notes	95	100
Southern Franklin Process	19	22
Southern Franklin Process, pfd.	98	101
Southern Worsted Corp., pfd.	88	92
Spartan Mills	..	140
Spencer Corp., serial notes	98	100
Union-Buffalo Mills	..	45
Union-Buffalo Mills, 1st pfd.	85	88
Union-Buffalo Mills, 2nd pfd.	43	46
Victor-Monaghan Co.	67	70
Victor-Monaghan Co., pfd.	112	117
Wallace Mfg. Co.	..	105
Ware Shoals Mfg. Co.	125	140
Whitney Mfg. Co.	..	40
Woodside Cotton Mills Co.	..	40
Woodside Cotton Mills Co., pfd.	..	42
Yarns Corp. of America, gold bonds	99	101

Textiles on N. Y. Exchanges

The following shows the movements of the leading textile stocks listed on the New York Stock Exchange and Curb for the week ending Aug. 6:

	High	Low	Last Sale	Net Change
Adams Mills	27⅛	26	27⅛	+ 1⅛
*American Thread, pfd.	3⅛	3	3	— ⅛
American Woolen	10	9½	10	— ⅛
American Woolen, pfd.	29⅜	28	28½	+ ⅛
*Assoc. Rayon, pfd.	47½	46½	47½	+ 2
Belding-Hemingway	4	3⅞	3⅞	— ⅛
Cannon Mills	23	22⅜	23	+ ⅛
Century Ribbon	4½	4½	4½	— ⅛
Collins & Aikman	25½	21½	22	— 2
Consolidated Textile	1	⅞	⅞	.....
*Courtaulds, Ltd.	10	10	10	— ⅛
*Fabrics Finishing	3⅛	2⅞	3	— ⅛
Gotham Hosiery	11	10½	11	+ ⅛
Industrial Rayon	94	92⅜	94	+ 3½
Kayser, Julius	24	24	24	— 1
Kendall, pfd.	81½	81½	81½	.....
Mallison	8⅜	8⅛	8⅜	+ ⅛
*Mock Judson	16	12	12	— 9
Mohawk Carpet	18	17½	17½	— ½
Munsingwear	45	45	45	.....
Pacific Mills	22⅜	20¼	22⅜	+ 2⅛
*Pepperell	85½	85½	85½	+ ½
Real Silk Hosiery	43⅜	42½	42½	— 1⅛
*Tubize Chat. B.	7½	7½	7½	— ⅛
United Piece Dye Wks.	25⅞	24½	25⅝	— ⅛

*Listed on Curb.

Fall River Mill Stocks

(G. M. Haffards & Co., Fall River)

	Bid	Asked
Algonquin Printing Co.	..	330
American Linen Co.	..	..
Barnard Mfg. Co.	..	10
Berkshire (com.)	..	14
Berkshire (pfd.)	..	62
Bourne Mills	..	10
Border City Mfg. Co.	..	5
Charlton Mills	..	60
Cornell Mills	..	10
Davol Mills	..	5
Davis Mills	..	12
Flint Mills	18	..
King Philip Mills	..	..
Laurel Lake Mills (com.)	..	8
Lincoln Mfg. Co.	..	10
Luther Mfg. Co.	..	..
Merchants Mfg. Co.	27	..
Narragansett Mills	..	10
Parker Mills, com.	..	..
Pilgrim Mills	..	65
Richard Borden Mfg. Co.	2	4
Sagamore Mfg. Co.	..	60
Shove Mills	4	8
Stafford Mills	..	1
Stevens Mfg. Co.	..	35
Union Cotton Mfg. Co.	24	..
Wampanoag Mills	..	..
Weetamoe Mills	..	1

N. Carolina Mill Stocks

(R. S. Dickson & Co., Charlotte, N. C.)

	Bid	Ask
Acme Spinning Co.	60	75
American Yarn and Processing Co.	..	71
Chadwick-Hoskins Co. (Par. $25)	7	11
Chadwick-Hoskins Co., 8%, Pfd.	96	99
China Grove Cotton Mills	96	100
Climax Spinning Co.	59	66
Clover Mills	..	25
Converse D. E. Co.	88	95
Crescent Spinning Co.	54	62
Dixon Mills	90	100
Durham Hosiery, 6%, Pfd.	30	35
Eagle Yarn Mills	57	65
Efird Mfg. Co.	70	81
Erwin Cotton Mills	..	120
Erwin Cotton Mills Co., 6%, Pfd.	90	97
Flint Mfg. Co.	..	81
Flint Mfg. Co., 7%, Pfd.	93	98
Globe Yarn Mills (N.C.)	..	20
Gray Mfg. Co.	..	81
Hanes, P. H. Knitting Co.	8	10½
Hanes, P. H. Knitting Co., 7%, Pfd.	..	99
Henrietta Mills, 7%, Pfd.	43	55
Imperial Yarn Mills	..	60
Linford Mills	60	75
Locke Cotton Mills Co.	45	55
Majestic Mfg. Co.	100	135
Mansfield Mills	..	75
Mooresville Cotton Mills	4	7
Mooresville Cotton Mills, 7%, Prior Pfd.	..	81
Myers Mills	..	72
Myrtle Mills	..	51
National Yarn Mill	50	60
Perfection Spinning Co.	55	66
Ranlo Mfg. Co.	..	115
Ranlo Mfg. Co., 7%, Pfd.	..	98
Roanoke Mills	60	..
Roanoke Mills, 1st Pfd., 7½%	87	95
Roanoke Mills, 2nd Pfd., 8%	88	96
Rosemary Mfg. Co., Pfd., 7½%	97	..
Rowan Cotton Mills Co.	68	80
Seminole Cotton Mills Co.	..	75
Sterling Spinning Co.	60	75
Stowe Spinning Co.	55	66
Victory Yarn Mills Co.	35	50
Ware Shoals Mfg. Co.	125	136
Ware Shoals Mfg. Co., 7%, Pfd.	92	98
Winget Yarn Mills Co.	38	50
Wiscassett Mills Co.	155	180

New England Textile Stocks

Quotations at "Public Sale" are based on last sales at Boston Public Auctions and Boston Stock Exchange. Bid and Asked prices are latest quotations of dealers.

	Public Sale	Bid	Asked
Am. Mfg. pfd.	68	60	64
Amoskeag	11⅞	12	13
Arlington	23½	23	25
Associated Textile	36½	34	37
Bates	63	76	81
Berkshire Associates, com.	12	12	14
Berkshire Associates, pfd.	59	60	65
Bigelow-Sanford, com.	55½	55	58
Boott Mills	120½	110	115
Edwards	80½	80	83
Esmond, pfd.	102	100	102
Farr Alpaca	68	67	69
Hamilton Woolen	40	39	41
Hill	18	18	23
Indian Orchard	20½	20	25
Ludlow	138	136	140
Merrimack, com.	50½	45	48
Nashua, com.	32½	24	36
Nashua, pfd.	77½	67	71
Naumkeag	88	83	86
Newmarket	25½	18	21
Otis	49½	43	46
Pacific	22½	22	24
Pepperell	85½	82	85
Plymouth Cordage	82	68	71
York	8½	7	9

New Bedford Mill Stocks

(Sanford & Kelley, New Bedford)

	Bid	Asked
Acushnet Mill	14½	15½
Beacon Mfg., con.	125	..
Beacon Mfg., pfd.	85	87
Booth Mfg. Co., com.	8	10
Booth Mfg. Co., pfd.	30	..
Bristol Mfg. Co.	27	29
City Mfg. Co.	38	41
Dartmouth Mfg. Co., com.	48	52
Dartmouth Mfg. Co., pfd.	86	..
Fairhaven Mills, pfd.	½	1
Gosnold Mill., com.	..	18½
Gosnold Mill, pfd.	..	45
Grinnell Mfg. Co.	21	23
Hathaway Mfg. Co.	37	38
Holmes Mfg. Co., com.	1	3
Holmes Mfg. Co., pfd.	8	..
Kilburn Mill	36	38½
Nashawena Mills	20	22
N.B. Cotton Mills, pfd.	10	12½
Neild Mill	31	35
Nonquitt Mills	4½	5½
Pierce Mill	115	120
Potomska Mills	29	31
Quissett Mills, com.	50	53
Soule Mill	50*	..
Taber Mill	9½	10½
Wamsutta Mills	14½	15½
Whitman Mills	1	2½
Gosnold Mill Notes	85	..
Whitman Mills 6% Notes	38	..

* Ex-dividend.

Textile Calendar

Chicago Yarn Men's Circle, Annual Golf Tournament, Nippersink Lodge, Genoa City, Wis., Aug. 28, 1930.

Worsted Yarn Spinners' Annual Outing, Manufacturers' Country Club, Oreland, Pa., Sept. 24, 1930.

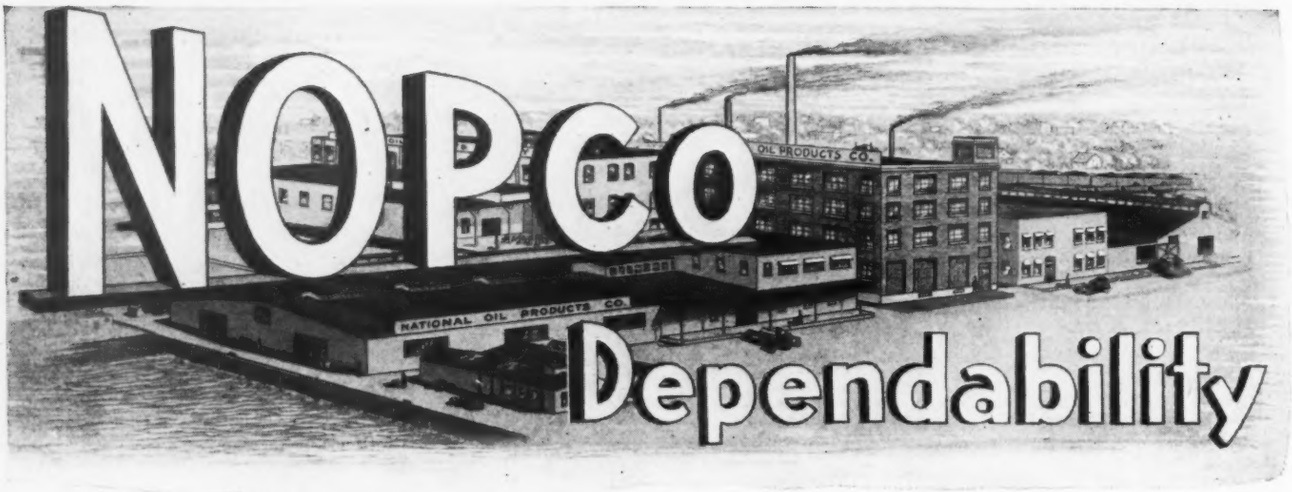
National Safety Congress, Textile Section, Annual Meeting, William Penn Hotel, Pittsburgh, Pa., Sept. 30-Oct. 1, 1930.

National Association of Cotton Manufacturers, Annual Meeting, Poland Springs, Me., Oct. 10-11, 1930.

Ninth Southern Textile Exposition, Textile Hall, Greenville, S. C., Oct. 20-25, 1930.

Textile Division, A.S.M.E., National Meeting, Poinsett Hotel, Greenville, S. C., Oct. 22, 1930.

Southern Textile Association, Semi-Annual Meeting, Poinsett Hotel, Greenville, S. C., Oct. 23, 1930.



A Series of Advertisements on Reasons Why Rayon Manufacturers Should Use TEXTOYL 1556.

Reason No. 2—Not a Trace of Odor After Four Weeks' Storage

Make this test for yourself. Dip pieces of knitted and woven rayon fabrics in TEXTOYL 1556. We will supply you with a generous sample. Store the treated goods in a sealed mason jar for three or four weeks. Also store similar rayon pieces, treated with the rayon oil you are now using. Then open the jars and note the odor in each. You will find the fabrics treated with TEXTOYL 1556 free from any trace of odor.

After oiling, it is often necessary to store rayon for some time before processing further.

If the oil turns rancid, foul odors are the inevitable result. This can be prevented by using

TEXTOYL 1556, *The Rayon Oil Supreme*

Practically neutral—will not rust metal parts.

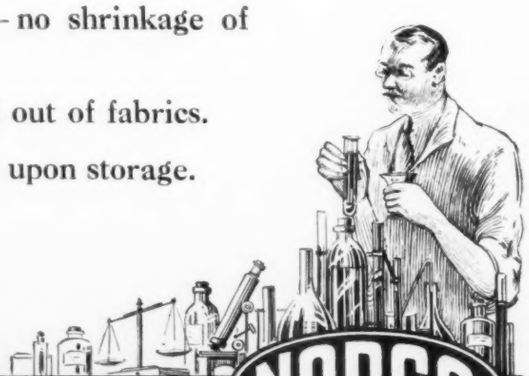
Resists oxidation—will not yellow rayon goods.

Has low viscosity, gives high penetration.

Moisture content is below 2% — no shrinkage of goods on drying.

Emulsifies freely—is easily rinsed out of fabrics.

Does not weaken or yellow rayon upon storage.



Write us for Sample or Demonstration

Ask for Booklet completely describing TEXTOYL 1556

NATIONAL OIL PRODUCTS COMPANY, Inc.
EXECUTIVE OFFICES AND FACTORY **HARRISON, N. J.** BOSTON, MASS. CHICAGO, ILL. ST. JOHNS NEWFOUNDLAND

NOPCO

Pushing Plans for Southern Textile Exposition

GREENVILLE, S. C.—The program for the ninth Southern Textile Exposition is rapidly assuming definite shape. On Wednesday, Oct. 22, the Textile Section of the American Society of Mechanical Engineers will hold a national textile meeting, beginning at 9 a.m. and concluding with a banquet in the evening.

The autumn convention of the Southern Textile Association will open on Thursday morning, Oct. 23, and continue with a varied and interesting program throughout the day.

A third convention of national importance is being considered favorably. An announcement concerning this will be made later.

W. E. Beattie, formerly president of Victor-Monaghan Co. and American Cotton Manufacturers Association, on Aug. 4 was elected a member of the board of directors of Textile Hall Corp. Construction of the new annex is nearly completed. Improvements and paintings are under way in the main hall.

Examination of Finished Broadsilks

(Continued from page 29)

consists of the grading of each yard as an individual piece of goods. Each yard upon consideration receives one of five gradings: 0%, 25%, 50%, 75%, or 100%. The final grading of the piece as a whole, therefore, is the average grading of the yards contained in the piece. Both the manufacturer and his customer are considered in this plan.

The customer is not interested in the cause of a defect. He is interested in how much less in cutting will be necessitated, or how seriously his customer in turn will complain. The manufacturer contends that silk is a product made from animal matter through a complicated process of throwing, winding, quilling, warping, entering, weaving, dyeing, etc.; and that besides the normal irregularities natural to animal fibers themselves, a reasonable number of manufacturing defects are to be expected, whereby reasonably uniform results may be obtained. Grading of any piece of material by different inspectors should result in approximately the same percentage.

Aberle Mills Resume Operation Pending Adjustment

The Aberle Hosiery Co. hosiery mills in Philadelphia resumed operation on Monday, an arrangement having been made by which the adjustment of wages and working conditions passes into the hands of a plant committee. The firm is not a party to the wage agreement signed by union heads and manufacturers in New York last week and reported in our last issue, but it is understood that some similar agreement is the aim of the plant committee. That amicable relations exist between the Aberle organization and the hosiery workers' union was indicated in a statement issued by Emil Rieve, national president of the American Federation of Full-Fashioned Hosiery Workers, and Alexander McKeown, president of the Philadelphia branch.

The statement reads in part as follows:

The H. C. Aberle Co. has not entered into contractual relations with the American Federation of Full-Fashioned Hosiery Workers nor is the firm a party to the general trade agreement formally effected last week between the unionized full-fashioned workers and the manufacturers' organization. News reports, based apparently on indications that the Aberle firm would be able to increase its working force shortly, indicating that some formal agreement had been signed between the union and this employer, are incorrect.

The status of the relations between the H. C. Aberle firm and the American Federation of Full-Fashioned Workers is briefly as follows: The Aberle firm has fulfilled the general principles laid down in the award of the Board of Arbitration which was issued last April. Under the terms of the original award, Dr. William H. Fineshriber was appointed arbitrator to deal with any questions which might arise as the award came to be applied. When Rabbi Fineshriber went on his vacation, a little more than a month ago, Dr. George W. Taylor, of the University of Pennsylvania, was induced by all parties to serve as arbitrator for the time being.

Any deviations in wages or conditions from those set forth in the original award will be negotiated by a committee of the employes, practically all of whom are union members, and the company, with Dr. Taylor sitting in the conference as impartial chairman. . . .

Gustav C. Aberle, general manager of the H. C. Aberle Co., stated that the Aberle Co. was not a union mill and never had been. He further stated that the Aberle mill has no arbitration agreement, but that a mediator, Dr. Taylor, was acting at the present time in connection with the affairs of the mill.

Celanese Style Show Stresses Formal Fabrics

Nearly three score of new fall garments, taken from the current offerings of leading dress manufacturers, and all featuring Celanese fabrics, were shown in a fashion review, held Wednesday afternoon by the Celanese Corp. of America, at the company's New York showrooms. Despite the torrid weather, the event was attended by a representative crowd of retail stylists and merchandisers.

Miss Marjorie Halligan, Celanese stylist who was in charge of the display, made a brief address explaining the aim of the event. She said it was arranged to appeal mainly to the retail trade, and to stress the style correctness and selling possibilities of Celanese garments. In all, 53 garments were shown on living models; this range included children's apparel, sport frocks and ensembles, and a wide variety of dance and evening frocks. The formal group was given unusual stress and the formal fabrics, which comprised half the total, excited much interest.

The fabrics included Celanese crepe caribe, nib cloth, taffeta, moire, an interesting silk-and-worsted mixture, panne satins, jacquard moires, mirrocel, and velvocel. An unusual feature was that the dresses were actually taken out of the season's stocks and in many instances the wholesale prices were quoted.

Textile Exhibitors Association Re-elects

At the annual meeting of the Textile Exhibitors' Association held in Boston Thursday of last week, the officers and directors were re-elected, without change, as follows: President, E. F. Hathaway; vice-president, W. I. Stimpson, of Draper Corp.; secretary-treasurer, Chester I. Campbell. Directors: The officers, and F. H. Bishop, Universal Winding Co.; C. A. Chase, General Electric Co.; D. F. Edwards, Saco-Lowell Shops; George P. Erhard, The Stafford Co.; F. W. Howe, Crompton & Knowles Loom Works; L. M. Keeler, Whitin Machine Works; S. F. Rockwell, Davis & Furber Machine Co.; Lewis E. Tracy, Lewis E. Tracy Co.

Industrial Rayon's New Price List

The price list of the Industrial Rayon Corp. of Cleveland, O., and Covington, Va., revised to conform with the recent general reduction, follows:

		—Bleached— Lustrous Skeins		—Unbleached— Lustrous Cones	
Den.	Fil.	1st	2d	1st	2d
75	18	1.60	1.50	1.65	1.55
100	40	1.30	1.20	1.35	1.25
125	50	1.20	1.10	1.25	1.15
150	30	.95	.90	.98	.93
150	40	1.00	.95	1.03	.98
150	60	1.15	1.10	1.18	1.13
200	40	.90	.85	.93	....
300	60	.78	.75	.81	....
450	60	.78	.75	...	....

Delustered 3 cents per pound additional.

Boston Wool Receipts

Receipts of domestic and foreign wools at Boston, also imports at Philadelphia and New York for the week ended Aug. 2, based upon data compiled by the Market News Service of Bureau of Agricultural Economics, Department of Agriculture, are as follows:

	Week Ended Aug. 2	Total to Date 1930	Total to Date 1929
Domestic.....	16,100,000	175,320,000	139,928,000
Foreign.....	1,100,000	47,303,000	74,285,000
Total.....	17,200,000	222,623,000	214,213,000
IMPORTS AT PRINCIPAL PORTS			
Boston.....	100,000	47,303,000	74,236,000
Philadelphia...	243,000	31,105,000	53,095,000
New York.....	493,000	29,003,000	47,842,000
Total.....	1,836,000	107,411,000	175,173,000

Silver Yarn Co. Formed in New York to Handle Worsted Yarns

William H. Silvershein for the last 16 years with Rottenberg Sons Co., Inc., has now formed in association with Henry Eisenstadt and William Rosenfeld a new firm catering to the knitted outerwear trade, handling Bradford and French spun worsted and zephyr yarns, under the name of Silver Yarn Co. with headquarters at 7 Waverly Place, New York City.

Army Will Buy Serge

PHILADELPHIA. — Depot Quartermaster, U. S. Army, will receive bids Aug. 18 to supply them with 5,000 yds. olive drab serge for caps, to be 16 ozs., 56 in. to 58 in. wide, specifications 8-4A.

Bemberg Fine Denier Prices Cut 20% to 25%

The new price list of the American Bemberg Corp.'s cuprammonium process yarns, which had been awaited for ten days in the rayon industry, was made public this week by S. R. Fuller, chairman of the board of that company. Mr. Fuller accompanied the list with a statement in which he said the reduction had been made possible by wider acceptance of Bemberg yarn and increased efficiency of production. The reduction is drastic and constitutes a cut of from 20% to 25% on the finer deniers. The 15 denier, 25 filament yarn, formerly selling at $4.15, is now $3.10, a drop of $1.05; the 25 denier, 25 filament, formerly $3.65, is now $2.85, a cut of 80c.; the 30 denier, 25 filament is reduced from $3.40 to $2.60, also an 80c. drop; and the 40 denier, 30 filament, formerly $3.15 is cut to $2.40, a reduction of 75c.

The new list quotes prices on the higher denier; previously it had not been the policy of this company to quote these, due to the diversity of offerings. The 52 denier, 30 filament, now sells at $2.20 for untwisted prepared skeins, and $2.35 for the five turns prepared or bottle bobbins or cones. Other prices of the higher denier, untwisted prepared or unprepared skeins follow: 65/45 is $2.00; 80/60 is $1.70; 100/75 is $1.40; 120/90 is $1.30; 150/112 is $1.25 and 180/135 is $1.10.

The complete new list follows.

Denier	Filaments	Untwisted Prepared Spools	5 Turns Prepared Bottle Bobbins or Cones	De Lux Knitting Yarns 5 Turns Prepared Bottle Bobbins or Cones
15	25	3.10	....	....
25	25	2.85	....	....
30	25	2.60	....	....
40	30	2.40	....	....
52	30	2.20*	2.35	....
65	45	2.00†	2.20	2.75
80	60	1.70†	1.90	2.45
100	75	1.40†	1.55	2.15
120	90	1.30†	1.45	2.00
150	112	1.25†	1.35	1.80
180	135	1.10†	1.20	1.65

*Skeins.
†Prepared or unprepared skeins.
Terms—2%—Thirty days.
F.O.B. Plant—Freight allowed to freight station earest to customer.

Mr. Fuller's Statement

The new price levels for Bemberg yarn will make it available to an increased number of manufacturers and for an increased number of uses, the new prices having been established to conform with the existing lower level of commodity prices, it is stated by S. R. Fuller, Jr., chairman of the board of the American Bemberg Corp.

Mr. Fuller's statement follows:

"Definite acceptance and wide distribution of Bemberg as a quality product, the development of specific yarns for specific uses especially in fine deniers, and an intensive analysis of manufacturing and merchandising problems during the last 12 months with increased efficiency of production, indicate price levels that will make Bemberg available for volume production of fabric, underwear and hosiery at price ranges not hitherto possible.

"In spite of present business conditions, increasing familiarity of trade and consumer with Bemberg and the development of new uses have resulted in a 40% increase in sales of Bemberg yarn during the first 6 months of 1930, as over the same period last year.

"American Bemberg Corp. believes that the trade will welcome the opportunity made possible by the new price levels and the substantial volume increase in the use of high grade fabrics, made from cuprammonium yarn that will result."

Government to Build Cotton Ginning Laboratory

Contracts will be let in the near future for the construction of the Government's new cotton ginning laboratory at the Mississippi Delta branch experiment station of the Department of Agriculture near Leland, Miss. The building is designed for the specific purpose of enabling the Department's cotton ginning specialists to study some of the fundamental principles of cotton ginning and cleaning and to develop a more exact understanding of the relationships between the properties and conditions of seed cotton and the mechanical conditions of ginning which affect the quality of the ginned lint.

The three-story building will be of steel construction with tile curtain walls covering an area 40 x 98 feet. Flexibility is the principal objective of the plans drafted by the agricultural engineering division of the Bureau of Public Roads which is in immediate charge of the project. A built-in overhead crane will be used to raise and lower the level of the third floor and otherwise facilitate the movement of machinery used in experimentation. It is expected that construction will be complete in November.

Lt. Col. McCain to Conduct Army Textile Tests

Lt.-Col. William A. McCain, formerly textile purchasing officer for the army, has been transferred from the Philadelphia Supply Depot of the Quartermaster Corps. to Washington, where he will direct the activities of the Army Industrial College. The Kirsner army blanket and the experimental khaki cloth also developed by Lieut. Kirsner were devised at the depot's laboratory during Col. McCain's command.

The Army Industrial College, of which Col. McCain becomes director, was founded with the idea of training officers for the mobilization of America's national resources in the event of another major emergency. Raw materials studies, in which wool has a prominent part, are stressed during the course. Five instructors and 45 student officers from the army, navy and marine corps comprise the personnel for the next ten-months session, beginning Sept. 2. Col. McCain was a member of the College's first graduating class, in 1924.

June Condition of Philadelphia Hosiery Mills

Output of hosiery in the Philadelphia Federal Reserve District was nearly 4% larger in June than in May according to reports filed by 130 mills in that section. The increase was due to larger production of men's seamless and boys' misses' and children's hosiery. The largest decline was in women's full-fashioned.

Shipments in June were 7.4% smaller than in May—the largest decline being in men's full-fashioned and infants'. Women's seamless showed a noticeable gain.

Stocks were 2.3% larger at end of month, although stocks of women's full-fashioned and seamless showed declines. Unfilled orders at the end of the month were 1.4% less than the month before. Advance business for full-fashioned goods and for men's seamless increased while smaller orders were reported for women's seamless, infants', boys', misses' and children's.

Canadians Plan Textile Conference Next December

One of the biggest conferences of manufacturers in the various branches of the textile industry of Canada is to be held in Ottawa some time in December, the purpose of the gathering to be discussion of the problems of marketing and distribution. R. F. Sparks, chairman of the executive of the Canadian Association of Garment Manufacturers, Ottawa, called a meeting at Montreal on Aug. 8, to settle definite details and dates for the conference in Ottawa.

Activity of Finishers

The National Association of Finishers of Cotton Fabrics, New York, has issued its monthly statement of percentage of normal average capacity operated in the industry. The figures, which show considerable curtailment, follow:

	July			
	1930 (4 Weeks)		1929 (4 Weeks)	
White and dyed combined	37	47% White, 53% Dyed	56	51% White, 49% Dyed
Fast black	15		26	
Logwood black	31		31	
Prints	30		85	

	June			
	1930 (4 Weeks)		1929 (5 Weeks)	
White and dyed combined	42	50% White, 50% Dyed	61	51% White, 49% Dyed
Fast black	14		23	
Logwood black	33		44	
Prints	54		87	

Scottsboro Mills Open Own N. Y. Office

Announcement is made by Scottsboro Hosiery Mills, Scottsboro, Ala., manufacturers of seamless and full-fashioned hosiery, that they have opened their own New York office at 366 Broadway. The office will be in charge of R. Connor. Scottsboro Mills was formerly represented by Rufus W. Scott Co.

Business News

Hussong-Walker-Davis Co. Plant Changes Completed

Alterations to the plant at Coral & Valetta Sts., Philadelphia, have been completed by Hussong-Walker-Davis Co., manufacturers of dyeing machines, and adjustments in their machine tool equipment have been made. Offices of the concern have been moved to new and larger quarters on the second floor, where officers, engineering department, drawing rooms, purchasing and accounting sections are located.

The staff of the combined concern includes J. H. Thompson, Noah Walker, and Eugene H. Davis, all of whom have been connected with the dyeing machinery business for a long period. Leading types of both Hussong and Walker & Davis machines have been retained, and there has been some standardization in order that the trade may have advantages of both machines in one through the merged firm. Changes that have been made in their plant have resulted in more efficient handling of all their materials.

Plant Addition for Universal Winding Co.

Universal Winding Co. has broken ground for a new three-story addition, 120x60 ft., to its plant at Providence, R. I. This addition is being constructed to give the company larger assembly space. The first floor will be devoted to the maintenance department, the second floor to machine storage and the third floor to assembly processes as an extension of the present assembly room. The new building will be connected with No. 5 Building by a bridge on the second and third floors.

Work will also be started soon on a second new building, one story in height, covering about 4,000 sq.ft., to house the machine painting departments.

Unruh with Fletcher Works, Inc.

Lewis R. Unruh, who has been identified with the textile machinery business for more than 20 years, is associated with Fletcher Works, Inc., Philadelphia, builders of silk throwing, rayon machinery and extractors, etc. Mr. Unruh is in their sales department and will cover the trade in all sections of the country.

W. F. Northrop Joins Draper Corp.

William F. Northrop, son of Jonas Northrop, who was at one time president of the former Hopedale Mfg. Co., Milford, Mass., later absorbed by the Draper Corp., Hopedale, Mass., and recently at the head of Standard Looms, Inc., Spartanburg, S. C., has joined the sales force of the Draper Corp.

Fenton Sales Engineer for Reliance

James S. Fenton has been promoted to the position of sales engineer of the New York office of the Reliance Electric & Engineering Co., Cleveland, Ohio, manufacturers of a.c. and d.c. motors.

New York Agent for Leavitt Machine

Charles C. Phelps, manufacturers' agent, 11 Park Place, New York City, has been appointed sales agent for Metropolitan New York and northern New Jersey, by the Leavitt Machine Co., Orange, Mass., to handle the Dexter valve-reseating machine for globe, gate and pump valves.

McBride in Prat-Daniel New York Sales Office

Prat-Daniel Corp., manufacturers of the Thermix stacks, dust collectors and Thermix air heaters, announces the appointment of C. B. McBride as a member of the sales department at their main office in New York City.

Cutler-Hammer, Inc. Acquires Reynolite Division

Effective Aug. 1, 1930, the Reynolite division of the Reynolds Spring Co., Jackson, Mich., became the wholly owned subsidiary of Cutler-Hammer, Inc. This transaction brought into the growing Cutler-Hammer line the Reynolite products, including bakelite flush plates, plural plugs, etc.

Chicago Bridge Opens Tulsa Office

The Chicago Bridge & Iron Works has opened a new sales office in Tulsa, Okla., in charge of D. A. Leach, formerly of the company's New York office.

This new office, which is the fourth one the Chicago Bridge & Iron Works has opened since the first of the year, is in the Exchange Bank Building.

Pollock Paper Agent for Sylvania Industrial

The Sylvania Industrial Corp. has completed agency arrangements with the Pollock Paper & Box Co. of Dallas, Tex. The Pollock company will henceforth represent the Sylvania Corp. in the southwest territory in handling sales of its transparent cellulose, Sylphrap and its recently announced moistureproof transparent cellulose wrapping, Nymphrap.

Barron Manager of Foxboro's Atlanta Office

W. W. Barron has been promoted to manager of the Foxboro (Mass.) Co.'s Atlanta office. Mr. Barron is a native of the Carolinas and a graduate of Alabama Polytechnic Institute. Since 1926 he has been with the company's Cincinnati office.

M. C. Welker, a graduate of Pennsylvania State University, and B. B. Peacock, an alumnus of George Tech, will assist Mr. Barron.

A. W. Taber, former manager of the Atlanta office, has been transferred to the Detroit office, where he will have full charge of the middle western territory, handling all sales of Foxboro instruments.

G. F. Hasslacher Resigns from R. & H. Chemical

George F. Hasslacher has resigned from the Roessler & Hasslacher Chemical Co. of New York, effective Aug. 1. Mr. Hasslacher at the time of his resignation was a director and assistant secretary. As an employee of the company, Mr. Hasslacher was active as manager of the commercial development division and manager of the advertising department.

Until now R. & H. is the only company in the United States with which Mr. Hasslacher has been associated. His service with the company was temporarily interrupted during the war when he became an inspector of powder and explosives and later was in the United States Army with the Engineers Department and Chemical Warfare Service. In 1922 Mr. Hasslacher went abroad for a year and was associated with the Deutsche Gold und Silber Scheideanstalt, vormals Roessler, of Frankfurt, a. M., Germany.

Mr. Hasslacher will spend the coming months with personal affairs.

Shafer Bearing Corp. Expansion

The Shafer Bearing Corp. manufacturers of the Shafer self-aligning roller bearing, announce the election of Victor W. Peterson as president and general manager. Mr. Peterson is also president of Hannifin Mfg. Co., and the Sherman-Manson Mfg. Co.

Plans for expansion of the Shafer Bearing Corp. business are being developed immediately and will include extension of the present line of roller bearings for industrial and railroad services. Additional bearing sizes and types of mountings for industrial applications will make the exclusive Shafer self-aligning design of roller bearings available for a wider range of machine and shop installation.

Link-Belt Occupies New San Francisco Plant

Link-Belt Co., Pacific division, has just moved into its new manufacturing plant and office, located at Paul Ave. near Bayshore Highway, San Francisco, Calif.

This added unit to Link-Belt's 16 plants and warehouses, located throughout North America, consists of a two-story office building of Spanish design; a warehouse 80 ft. x 120 ft., three stories high; and the manufacturing building, containing the machine shop, steel shop, plant offices and their auxiliary departments.

Within this plant, designed to enable Link-Belt to give quick, efficient service to their customers, is manufactured all kinds of elevating, conveying and power transmission machinery.

Quigley Co. Buys Annite Industries

The Quigley Co., Inc., 56 West 45th St., New York, has purchased the entire business and goodwill of Annite Industries, formerly located at Washington, D. C. Annite is a cleansing compound for which exceptional detergent properties are claimed due to its collodial action.

Obituary

Raymond L. Young

Raymond L. Young, manager of the Talladega (Ala.), mill of the Bemis Bag Co., Boston, Mass., died suddenly July 23 on the train en route to Birmingham, Ala. Mr. Young was a native of Utica, N. Y., and has been connected with the Bemis company for about 20 years.

John R. Dewitt

John R. Dewitt, president of the National Bag Corp., died on July 28 of a heart attack while on a train from his home in Fairfield, Conn., to New York. Before he organized the National Bag Corp., about three years ago, Mr. Dewitt was with the Riegel Sack Co.